AFFECTIVE REACTIONS AND PSYCHOSOCIAL FUNCTIONING OF CHILDREN IN THE COURSE OF PSYCHO-EDUCATIONAL ASSESSMENT

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Every day, children throughout the United States are given psychological evaluations for many different clinical and psycho-educational purposes. Very little research has attempted to investigate children's responses to the experience of having intellectual and achievement tests administered. The goal of the current research was to explore the effect a psycho-educational evaluation has on children in areas of self-concept and anxiety. Dependent variables consisted of pre- and post-test measures of anxiety and self-concept. A total of 75 children in the 4^{th} 5^{th} and 6^{th} grades were recruited after referral for evaluation and possible placement in the Talented and Gifted Program or Special Education. This study employed Analysis of Variance (ANOVA), t-tests, multiple regression analysis, and correlational analysis. Findings included initial evidence that children endorsed decreased anxiety after psycho-educational assessments rather than increased anxiety, suggesting that fear of unknown situations may be more anxiety provoking than the actual situation itself, potentially beneficial findings for psychology and psychometric professionals who evaluate children daily. Students endorsement of academic self-concept significantly predicted anxiety after a psycho-educational evaluation, indicating that students who feel capable in academic areas may endorse less anxiety after an evaluation than

students who do not feel academically capable. Finally, negative verbal interaction with parents significantly predicted lower general self-concept scores, providing evidence that the manner in which parents verbally relate to their children may have significant impact for the mental health of children.

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CHAPTER I

INTRODUCTION

Every day children throughout the United States are given psychological evaluations for many different clinical and psycho-educational purposes. Evaluations are used to assess children for diagnosis, eligibility determination for special programs, evaluation of progress and change, behavior problems, physical problems, and academic problems (Salvia & Ysseldyke, 1995; Sattler, 1992). A vast body of literature is available to guide an evaluator with decisions about which measures to use for different situations or for specific types of referral questions (Salvia & Ysseldyke; Sattler; Kamphaus & Frick 1996). However, there has been limited research conducted to determine what effect these evaluations have on the children they are meant to help. The purpose of this research was to gain an increased understanding of the way in which a psycho-educational evaluation (also called a psychological assessment) affects children in domains such as self-esteem/self-concept, and anxiety. Additionally, this research examined changes in anxiety levels and perceptions of self-concept after the assessment was completed.

Psychological Assessment

The Content and Purposes of Psychological Assessment

A psychological evaluation typically consists of a variety of tests designed to elicit specific information. Green (1981) proposed that a test provides a scale of measurement to compare consistent individual differences for a specific psychological concept. Tests utilized by psychologists require that each person be assessed in the same way, so that a fair and equitable comparison among people taking the test is available. Individual scores can then be ordered and ranked according to the specific concept. While psychologists use many different test measures to answer a variety of specific questions, an evaluation is not complete until intelligence and achievement have been measured.

When psychologists measure intelligence, they are assessing a person's ability to adjust or adapt to the environment. In other words, they are assessing the ability to learn or the ability to perform abstract thinking (Sattler, 1992). Measuring achievement, in contrast, may be thought of as measuring what an individual has learned. Both intellectual measures and achievement measures are highly structured and can be quite lengthy, lasting up to four hours when detailed achievement information is required. According to Kamphaus and Frick (1996) the goal of psychological assessment with children is to diagnose the source of the child's difficulty and to make treatment recommendations based on this diagnosis. Without basic knowledge about information processing and

intellectual strengths and weaknesses, it is impossible to make helpful or realistic recommendations designed to improve functioning.

Tests used in psychological evaluations should be norm referenced (Sattler, 1992). The term “norm referenced” indicates that the tests have been standardized on a clearly defined group so the score any specific individual obtains reflects a rank within the defined group. Norm referenced tests assess many areas including intelligence, reading, arithmetic, spelling ability, visual-motor skills, gross and fine motor skills, and adaptive behavior. According to Sattler, norm referenced tests are indispensable in the assessment process.

Tests utilized in psychological evaluations may have a multitude of purposes and can be used to measure personality characteristics, neurological damage and/or functioning, problem-solving skills, and feelings or emotions. During a psychological evaluation or assessment, several things are considered, such as the way a child performs a variety of tasks in different settings and contexts and the meaning of his or her performance in terms of total functioning (Salvia & Ysseldyke, 1995).

Preparing a Child for a Psychological Assessment

According to Sattler (1992), children are likely to have some idea about the purposes of the tests they are given during an assessment. They may, in fact, react adversely to the test situation. He also states that even before the assessment begins, some children may wonder why they are being tested and how the results will affect their future (Sattler). During a psychological evaluation,

the tasks children are asked to complete can be formidable. Difficult questions or items for which a child does not know an answer may produce stress (Sattler). Children may ask an examiner if they have answered an item correctly, or they may become flustered when they provide incorrect answers. Sometimes, a child may have no idea what the correct answer is, fostering frustration, anxiousness or feelings of insecurity.

According to Brooks (1990) the self-esteem of learning disabled children is often fragile. Therefore, when children who have experienced difficulties in academic settings undergo psychological assessments, the test session may be especially stressful, causing anxiety and discomfort. Often, these children already have experienced frustration in the academic setting and may perceive the assessment as yet another academic challenge in which they are unsuccessful.

Skillful examiners can communicate understanding, sincerity, acceptance, and empathy to establish rapport and decrease possible negative reactions to the testing situation. Kamphaus and Frick (1996) suggest that in assessment, rapport refers to the interactions between the assessor and the person being assessed (the client) that promote confidence and cooperation in the assessment process. Sattler (1992) proposes several ways to achieve rapport with children during assessment to prevent any negative reactions from impacting the child in an undesirable manner. For example, he recommends that examiners approach children by calling them by name and introducing

themselves at first contact. Providing a brief but frank explanation about the purpose for the assessment is often helpful during the examiner's initial conversation with the child (Sattler). Kamphaus and Frick also believe explaining an evaluation is important; they suggest that reviewing this with the child in developmentally appropriate language will help to eliminate misconceptions and to reduce unnecessary anxiety.

Often when assessing children the motivation for the evaluation on the part of the child is low since they are frequently not the person requesting or seeking the assessment (Kamphaus & Frick, 1996). Thus, conveying a sincere interest in seeing the child succeed while providing unconditional acceptance and support in the event of failure is crucial to maintaining rapport throughout the evaluation (Sattler, 1992). Kamphaus and Frick point out that establishing rapport may also involve the cooperation of multiple participants. They suggest that an assessor be skilled in enlisting and fostering the cooperation of the client as well as other persons needed to complete the assessment, e.g. teachers, parents.

With respect to the elaborate but highly structured testing portions of an evaluation, Sattler (1992) suggests brief, natural and casual praise for the child's effort rather than for specific answers. In fact, he makes a subtle but important distinction between encouraging children for their effort rather than for the results of their effort. Encouraging children to respond to all questions despite reluctance is important and may both reduce anxiety and sustain interest. If an

examiner suspects that a child has experienced frustration on an item, Sattler suggests statements like, “That was a bit difficult, but no one is expected to get them all right. Now let’s try another one.” (p.86) Such brief explanations are thought to alleviate any perceived apprehension during the assessment. Helping children maintain a sense of self-esteem and self-acceptance is key to ensuring a successful relationship (Sattler).

Possible Childhood Reactions and Responses to Assessment

It is possible, despite the best efforts of a skilled examiner and the use of the aforementioned techniques and suggestions, for children to leave the assessment situation feeling frustrated or discouraged. Frustration or discomfort after the test situation may occur because an assessment is academically challenging. As noted, praise should be only given for effort, not accuracy (Sattler, 1992). Thus, no confirmation of correct answers is possible during intellectual and achievement tests. Nor is it appropriate for examiners to provide hints or assistance with answers. The lack of confirmation about correct or incorrect answers may create insecurity or frustration for a child. Child and Waterhouse (1953) noted that frustration produced a decrease in the quality of performance to the extent that the frustration evoked other responses which interfered with the ongoing performance. It is possible, therefore, that the frustrating aspects of the assessment may make a child uncomfortable enough that their performance, or their perception of their performance, is negatively affected.

Some children have high needs for external motivation and confirmation. Administering a series of challenging tasks without accompanying praise for correct answers may be stressful to those children. According to Herbert and Cohen (1996), stress occurs when individuals perceive that environmental demands exceed their abilities to cope. Stress may be thought of as discomfort and may be exhibited by a variety of physical and emotional responses. These responses may include increased anxiety, decreased self-concept, decreased sense of competence, or in more emotionally fragile children, increases in depression and other psychological symptomatology.

Intelligence and achievement tests utilize “ceiling levels” in their construction (Sattler, 1992). A ceiling level is attained after several incorrect answers and is the point at which a subtest is discontinued. In practice, this may result in a child feeling frustrated or upset after several situations during which he has been asked a series of questions that he is unable to answer. The continued experience of perceived failure with the lack of confirmed correct responses together may heighten a child’s sense of insecurity or inadequacy.

In the United States, a person’s worth is determined to a large extent by how he or she performs. Children are increasingly judged not by their human qualities but by their accomplishments and achievements (Medeiros, Porter & Welch, 1983). Papay and Spielberger (1986) have also commented on the evaluative orientation in the majority of schools, and point out that higher levels of temporary anxiety are typically evoked by complex or difficult tasks. This

societal tendency may result in pressure on children that may make grades or academic competition very important (Medeiros et al., 1983). With the high demand for performance that is typical during a psychological assessment, it seems possible that a child's sense of competence or self-esteem may decrease and/or their anxiety level may increase as a result of experiencing a psychological evaluation.

While there are many child characteristics that are valuable to investigate, only some of them are potentially related to a psychological assessment or evaluation. The effect a psychological evaluation has on children can be examined in several domains. The purpose of the current research was to examine the effect a psychological evaluation has on children in areas of self-concept and anxiety. Additionally, locus of control, family interaction, and parenting style history variables were examined.

Child Characteristics

Child Self-Esteem/Self-Concept

There are a variety of words and phrases that researchers use to describe how people feel about themselves. The words self-esteem and self-concept typically elicit a huge variety of possible ideas and definitions. William James (1963) first described self-esteem as the ratio of a person's perceived success in a certain area compared to the importance the person attaches to success in that area. He also theorized that failure in areas a person considered unimportant would have little impact on the person's general self-esteem. In

other words, James thought that if a person did not consider a specific area important, it would not matter to that person if he or she performed poorly in that area. There are many children and adolescents who profess to be unconcerned about their lack of academic success. If James' hypothesis is true, we would expect that children and adolescents who attach little importance to academic endeavors would be relatively unaffected by their own poor academic progress.

Harter (1982) stated that the assessment of an individual's self-esteem is critical to clinicians and researchers. Because psychological evaluations are conducted so frequently and are heavily weighted by academic tasks, it follows that determining the impact of a psychological evaluation on a child's self-esteem is also critical for clinicians. While much discussion has surrounded the impact of other childhood experiences on self-esteem, little effort, if any, has been invested in discovering whether academically challenging psychological evaluations are in actuality causing changes in children's self-concept.

Many researchers have noted that research with self-esteem and self-concept has been less than clear due to the confusion in conceptualization of the two terms. Harter (1982) identified problems with vague definitions of self-esteem and self-concept in the literature. Burnett (1994) pointed out difficulties concerning the delineation of the terms in psychosocial research. Additionally, Burnett stated that the distinctions between the two constructs, as well as the link between them, were not clear. After a comprehensive review of self-concept research Marsh and his colleagues (1983b, 1985) concluded that many studies

of self-concept lack theoretical bases, have methodological shortcomings, use imprecise definitions of self-concept and result in inconsistent findings. According to Marsh and his colleagues (1985) self-concept is a common personality construct, and therefore, researchers do not feel compelled to offer theoretical or empirical support for self-esteem and self-concept constructs. In fact, after lengthy literature reviews and research, Marsh and his colleagues (1983a), claim there is no empirical support for the distinction between self-esteem and self-concept.

These challenges in defining constructs have resulted in a variety of self-esteem definitions by researchers. For example, Harter (1990 p.225) defined self-esteem as "how much a person likes, accepts and respects himself [sic] overall as a person." Shavelson and Bolus (1982) broadly defined self-concept as a person's perception of themselves. They postulated that a person's perceptions are formed through experiences and interpretation of their environment while being influenced by evaluations from significant others, reinforcements, and attributions made about their behavior (Shavelson & Bolus).

After a literature review on self-concept and self-esteem, Burnett (1994) proposed that self-concept has a cognitive and comparative belief about one's characteristics while self-esteem has a global cognitive and affective/feeling orientation, focusing on how an individual feels about him or herself as a person. In other words, in Burnett's opinion, self-concept has more to do with thinking and the way one compares oneself to others while self-esteem indicates a

feeling or emotional construct (Burnett, 1994). Most recently, Zimmerman, Copeland, Shope & Dielman (1997) defined self-esteem as the evaluation people make about themselves that expresses a self-judgment of approval, disapproval, and personal worth

Along with confusion regarding the definitions of self-concept and self-esteem, there are also different theories about how they are structured. Shavelson and Bolus (1982) proposed that self-concept had both a descriptive and an evaluative dimension whereby individuals may describe themselves e.g., I am happy and evaluate themselves e.g., I do well in school. Self-concept becomes increasingly multifaceted as the individual develops from infancy to adulthood. This Shavelson and Bolus theory of self-concept is hierarchical in nature, multifaceted, and includes perceptions of behavior at the base with inferences about self in general at the next level. They proposed that general self-concept should be at the apex of the self-concept hierarchy with situation-specific self-concepts low in the hierarchy. Their rationale for the structure of the hierarchy was in part defended by the fact that measures of academic self-concept and indices of achievement tend to correlate higher than correlations between general self-concept and achievement. Shavelson and Bolus found support for their multi-faceted interpretation of self-concept, but pointed out that empirical testing of its hierarchical structure was lacking.

Marsh and his colleagues (1983a, 1983b) have found empirical support for Shavelson's hierarchical model of self-concept and pointed out that the

dimensions of self-concept do appear to be hierarchically arranged; though they may not be in the particular arrangement suggested by Shavelson and Bolus (1982).

With different definitions and models for self-esteem and self-concept there are a variety of ways in which self-esteem in children and adolescents has been measured over the years. Coopersmith (1967) and Piers and Harris (1964) were some of the first researchers to quantify, measure, and describe self-esteem with children and adolescents. According to Harter (1982), Coopersmith assumed that children did not make distinctions among the domains in their lives. His measure, therefore, could not separate differences in a child's self-concept in diverse areas. Harter theorized that children do not feel equally competent in every skill domain. Her model of competence motivation for use with children placed an emphasis on the child's perception of competence (Harter, 1990).

While there is still disagreement and difficulty defining the terms self-esteem and self-concept, recent research with self-esteem and self-concept has provided more information about the constructs. Low self-esteem has been correlated in adolescence with low life satisfaction, loneliness, anxiety, resentment, irritability, and depression (Chubb, Fertman & Ross 1997), and with suicide, delinquency, substance use and poor academic outcomes (Zimmerman et al., 1997). High self-esteem has been associated with academic success, internal locus of control, and positive sense of self-attractiveness (Chubb et al.,

1997), and with high levels of academic achievement, and positive relationships with peers (Zimmerman et al.). A four year longitudinal study with 174 students indicated that adolescent females reported lower self-esteem than adolescent males consistently throughout high school (Chubb et al.). The authors theorized that this consistency indicated that critical years for self-esteem development occur before high school.

The longitudinal study with 1160 students over a six year span of time by Zimmerman et al. (1997) yielded results which were not consistent with previous reports of stability and gradual increases in self-esteem during grades 7 through 12. They suggested that overall trends of self-esteem may not adequately characterize the typical adolescent experience. A single model describing adolescent development may not be adequate for youths in different self-esteem trajectories as they negotiate a variety of developmental experiences.

Unfortunately, the bulk of informative research on self-esteem has been focused on adolescents, not younger school-age children. While there is no doubt that understanding the impact and causes of low self-esteem in adolescence is important, there is also substantial need to understand such concepts and the manner in which they impact life experiences for young children.

Locus of Control

Rotter developed the locus of control concept to describe how much a person believes that desired outcomes are dependent on his or her actions and

abilities (Larde & Clopton, 1983). Locus of control was originally conceptualized as unidimensional, meaning that a person could be categorized on either end of the general locus of control construct. An internal orientation indicated that a person believed his or her actions were important factors in achieving valued goals. An external orientation implied that a person believed fate, chance, God, or powerful others were in control of desired outcomes. Kulas (1996) defined internally controlled people as those who believe that reinforcement is due to their own effort or ability, and externally controlled people as those who believe that reinforcement is due to fate, chance or some other powerful external force. He also inferred that internally oriented people may have a more integrated personality and are more stable in their perceptions of control.

During the past 25 years, locus of control has become a widely researched personality variable (Chubb, et al., 1997). Although Rotter's (1966) Internal-External locus of control scale is one of the most widely used instruments to assess general locus of control orientations, there are several specific scales which have been designed for use in a variety of settings (Larde & Clopton, 1983). According to Hau (1995) there are now a plethora of scales which attempt to measure locus of control, and several that have been designed specifically for use with children.

Nowicki and Segal (1974) theorized that antecedents to the development of a locus of control orientation would be linked to the parent-child relationship. Their findings indicated that perceived parental nurturance might be intimately

involved in the development of a child's locus of control orientation. An internal locus of control has been positively related to less interpersonal distance from others (Duke & Nowicki, 1972). Further, training of maternal behaviors and skills designed to increase independence and self-reliance are also related to an internal locus of control (Wichern & Nowicki, 1976). De Man, Leduc and Labreche-Gauthier (1992) assessed parental control in child rearing and locus of control in 558 high school students. Boys and girls in the study who described their family backgrounds as more restrictive tended to have an external locus of control, believing that powerful others and chance determine. They concluded that parental control is not a correlate of locus of control, but rather that it's dimensions are related to different patterns of child rearing.

Nowicki and Strickland (1973), the authors of one widely used locus of control scale for children, the Nowicki-Strickland Locus of Control Scale, reported that locus of control is fairly stable throughout the childhood years and becomes more internal with age. They found that internal scores on their scale were significantly related to academic competence and social maturity. Other researchers have reported similar findings about the stability of locus of control during childhood (Cairns, McWhirter, Duffy, & Barry, 1990; Chubb et al., 1997).

According to Chubb and colleagues (1997), locus of control in youth becomes more internal over time as development and maturity continue. While locus of control may be influenced by interventions over short periods, it does not seem to be an easily changed aspect of personality. Both Chubb et al., and

Kulas (1996) reported that locus of control is likely established in a developmental stage prior to adolescence. In Kulas' longitudinal study with adolescents, locus of control was also relatively stable. His findings did not empirically support other researcher's assertions that perceptions of internal locus of control increase with age.

Many researchers suggest that locus of control is determined at least in part by school achievement (Kulas, 1996; Nowicki & Segal, 1974; Nowicki & Strickland, 1973). Kulas proposed that shifts in locus of control are determined by school achievement. He theorized that locus of control is more stable than school achievement since school performance may depend on temporary factors associated with specific teachers or classmates. With respect to locus of control differences in males and females, Archer and Waterman (1988) reviewed 22 studies on locus of control and reported that there was not enough evidence to demonstrate that gender differences exist. In support of the Archer and Waterman findings, Chubb et al., (1997) did not find significant differences in locus of control between males and females. Internal scores on locus of control scales have been identified as a correlate of independent, striving behavior (Nowicki & Strickland, 1973). Powell, Denton, and Mattsson (1995) described that individuals with an external locus of control orientation suffer higher levels of stress, depression, anxiety, and illness than people with an internal locus of control. They noted that depressed children who tend to have an external locus of control lack belief in themselves as primary contributors toward success and

show low levels of perceived control and competence. These research findings indicated that locus of control was a significant predictor of self-reported depression in both male and female adolescents.

Self-esteem/self-concept and locus of control have been frequently paired in research studies designed with children and adolescents as participants (Cairns, McWhirter, Duffy, & Barry, 1990; Chubb, Fertman, & Ross, 1997; Enger, Howerton & Hobbs, 1994; Huebner, & Dew, 1993; Hojat, Borenstein & Shapurian, 1990; Marsh, Cairns, Relich & Barnes, 1984). Enger et al., (1994) found a moderate relationship between locus of control and self-esteem. Their findings indicated that students who scored higher on internal control had higher self-esteem. In discussing their results, they proposed that students who assume more responsibility for what happens in their lives tend to feel better about themselves.

After many years of research with locus of control, the idea that it is a multidimensional construct has been proposed (Connell, 1985; De Man, et al., 1992). There are now measures designed to assess domain-specific dimensions of locus of control in children (Connell). Previous measures of locus of control in children have not addressed whether age-related increases in internality, decreases in externality, or both should be expected. Connell proposes that the framework of childhood is developmental and presents a multidimensional scheme that provides an assessment of what children know about the attributes

that control their successes and failures and how much they do not know about why they succeed and fail.

In sum, research has provided a great deal of information about locus of control in childhood and adolescence. Locus of control is related to academic competence and social maturity, but does not appear to vary significantly between males and females. It may be linked to a child's early relationship with his or her parents, and it is considered a stable characteristic that seems to be established prior to adolescence that is not easily changed after short term interventions. Understanding how children feel about who or what controls their successes and failures, as well as how much they do not know about why they succeed or fail, is very important for researchers.

Anxiety

Anxiety in children has been of interest to psychologists for many years. Watson and Rayner (1920) published their findings on conditioned fear in Albert, an 11 month old baby, in a series of examinations conducted more than 75 years ago. After a white rat was repeatedly presented to Albert and paired with a loud noise, Albert exhibited conditioned fear of the rat and, subsequently, several other white furry objects. Despite this long history of interest in the anxiety children experience, Ollendick (1979) reported that there is still little understanding of just what constitutes anxiety in children.

Francis and Ollendick (1987) described anxiety by pointing out that fear, phobia, and anxiety are terms that are typically used interchangeably. Symptoms

associated with fear, phobia, and anxiety include avoidance behaviors, autonomic nervous system reactions, and subjective feelings of nervousness and distress. Fear is said to be a normal reaction to a real or perceived threatening object or situation. A phobia is considered a special form of fear that is disproportional to the degree of threat posed by the feared stimulus. Anxiety is considered a set of physiological reactions, subjective feelings of distress, and avoidance behaviors that occur without obvious precipitating external threats.

Hoghughi (1980) defined anxiety as an unpleasant emotional experience, varying in degree from mild unease to intense dread. Physiological and behavioral changes that accompany anxiety can be considered appropriate in some circumstances, such as prior to examinations. The physical changes of anxiety also have significant biological advantages for survival because the increased alertness and awareness are a response to threat or unfamiliarity. Hoghughi stated that anxiety levels are highly variable; thus different children will show quite different responses to essentially the same anxiety-inducing situations.

Finally, Schroeder and Gordon (1991) have defined anxiety as an internally cued aversive emotional state with subjective discomfort and physiological arousal. Some people appear to be predisposed to experience anxiety as a response to a wide range of stimuli whereas others have more transitory moments of anxiety that may fluctuate in duration and intensity.

Reynolds and Richmond (1979) proposed that anxiety tends to be multidimensional in nature.

The terms “trait” and “state” anxiety have been used to discriminate types of anxiety (Schroeder & Gordon 1991). Spielberger (1973) defines state anxiety as transitory anxiety or subjective and consciously perceived feelings of apprehension, tension, and worry. These transitory anxiety states vary in intensity and fluctuate over time (Rhone, 1986). In contrast, trait anxiety is described as relatively stable individual differences in anxiety proneness (Spielberger). Papay and Spielberger (1986) point out that the distinction between state and trait anxiety can also be considered the difference between viewing anxiety as an emotional “state” contrasted with individual differences in anxiety within personality traits. Reynolds (1980) support for the distinction between state anxiety and chronic or manifest trait anxiety was apparent when he failed to find a correlation between measures assessing both trait and state anxiety.

Elevations in state anxiety are normally evoked in children when they are exposed to stressful situations (Spielberger, 1973). In general, children who are higher in trait anxiety experience state anxiety elevations more frequently and with greater intensity than low trait anxious children. In a study designed to evaluate the relationship between trait and state anxiety, as well as cognitive behaviors and performance, Houston, Fox, and Forbes (1984) found that high trait anxious children reported more state anxiety than low trait anxious children

in stressful situations, thus providing support for Spielberger's (1973) contention. In the Houston et al. (1984) study, the same mathematics test was presented to children in two different conditions. For one group the task was presented as a game that most children enjoy (low stress condition). The other group was instructed that they were being given a math test for which they would be evaluated and compared to other students (high stress condition). The results indicated that children in the high stress condition relative to those in the low stress condition reported more state anxiety and made more errors on the mathematics task. Papay and Spielberger (1986) also found that higher levels of state anxiety were typically evoked by complex or difficult tasks.

A psychological evaluation is academically challenging, demanding, and highly structured and can be conceptualized as a complex or difficult task. Assessments, therefore, appear to qualify as stressful situations, or ones that are likely to elevate state anxiety. It follows that a psychological evaluation may increase a child's state anxiety level.

Parental Characteristics

Parent/Caregiver Styles

Early childhood experiences, and especially interactions with parents, are thought to contribute significantly to the overall picture of personality and behavior (Hojat, et al., 1990). These ideas have often been the rationale for research about parenting styles. The relationship between parents and their children and the resulting child behavior has been studied frequently by social

researchers (Baumrind, 1971; Blake & Slate, 1993; Enger et al., 1994; Gordon, Jones, & Nowicki, 1979).

Baumrind (1971) defined three types of parents based on her extensive research with parents and children. She described authoritarian parents as those who shape, control, and evaluate their children's behavior based on a set standard of conduct. These parents tend to value obedience and often favor punitive measures to curb the willfulness they perceive in their children when the children's behavior conflicts with what the parent believes is right. Verbal give and take is not encouraged in these families since authoritarian parents believe their children should not question the parent's word regarding what is right.

The second category Baumrind (1971) identified was that of the permissive parent. The permissive parent is identified by their nonpunitive, acceptant, and affirmative manner toward their children's impulses. Few demands are made of children with permissive parents and policy decisions, as well as family rules, are considered in consultation with the children. Children are allowed to regulate their own activities as much as possible and are not encouraged to obey externally defined standards. Permissive parents may use reason, but typically not power, to accomplish their purposes.

The third category Baumrind (1971) described was authoritative parents interested in directing their children's activities in a rational, issue-oriented manner. These parents encourage verbal give and take and share the reasoning behind decisions and issues with their children. Authoritative parents exert firm

control at points of parent and child divergence but do not hem children in with restrictions. The authoritative parent maintains special rights as an adult but also sees the child's individual interests and characteristics. Reason, as well as power, are used to achieve parental objectives. Authoritative parents do not regard themselves as infallible. Baumrind generalized that authoritative parents were the most likely to facilitate the development of competence, responsibility and independent behavior in children.

Lamborn, Mounts Steinberg and Dornbusch (1991) used Baumrind's general categories but presented evidence to distinguish permissive parents into two different groups. Specifically, they separated permissive parents by indulgent and neglectful characteristics and showed that failing to distinguish between these two subgroups would confuse findings on the consequences of permissive parenting in child development. Lamborn et al. (1991) postulated that families whose low level of control is derived from an ideological orientation which has its foundations in trust, democracy, and indulgence (indulgent permissiveness) are functionally different from families whose permissiveness is a result of disengagement from the responsibilities of child rearing (neglectful permissiveness).

While parents may not adhere to every detail presented in the previous descriptions of parenting styles, it is clear from the body of literature available that parenting categories are a useful framework to discuss family interaction in general terms.

Parental Relationship to Child Characteristics.

While broad descriptions of parenting styles are helpful to conceptualize general family patterns, it is important to address the actual relationships between parents and their children. It is also meaningful to assess the resulting consequences of the nature of these relationships. From the earliest moments, the parent-infant relationship is shaped by reciprocity (Givelber, 1985). Parents have frequently been implicated as the principal causal agents in their children's behavioral, emotional, personality, and cognitive development (Holden & Edwards, 1989). A mother and father's acceptance and joy in a child become incorporated into the child's sense of him- or herself as the parent's belief in the child's basic goodness and capability also become part of the child's own sense of his or her worth (Givelber).

Reciprocal relationships, like mutual ones, are one way in which a person comes to know themselves (Powell et al., 1995). Mutuality within a relationship that allows a person to feel heard, seen, understood, and known while conveying emotional availability is vitally important to most people's psychological well-being (Jordan, 1991). High levels of mutuality in relationships may increase a person's sense of vitality, the desire to further connections with others, and ultimately one's self-esteem, while low levels of mutuality may lead to a reduced capacity to cope and diminished self-esteem (Powell). In fact, adolescents in detached relationships with parents reported greater anxiety, more depressive symptomatology, and lower self-worth than those in individuated or connected

relationships with parents (Delaney, 1996). One very relevant dimension in defining relationship types was the adolescent's subjective feeling of closeness toward each parent (Delaney). Hojat et al. (1990) also noted this pathway to high self-esteem and suggested that parent responsiveness fosters the development of a secure attachment which in turn is associated with increased self-esteem in the child and a willingness to establish good social relations.

Studies have demonstrated the significant relationship between perceived family environment and children's psychological functioning (Burt, Cohen & Bjorck, 1988). As research on specific parenting styles began to be repeatedly utilized to investigate parent child relationships, trends describing general types of child behaviors and characteristics were correlated with specific parental styles. Families that were perceived by young adults as cohesive, organized and facilitative of expression during childhood years were related to positive psychological functioning during adulthood, whereas families perceived as conflict-ridden and controlling were related to negative functioning. Hojat et al. (1990) found satisfaction with peer relationships decreased as dissatisfaction with the manner in which people had been parented during childhood increased.

Lamborn et al. (1991) asked 4100 adolescents to rate their parents on acceptance/involvement and strictness/supervision dimensions and to report their own behavior and psychological functioning. Findings indicated that there were differences between adjustment and psychological functioning among the youth, based on how they had characterized their parents in the four parenting

groups (authoritarian, authoritative, indulgent and neglectful) utilized by Lamborn et al. Adolescents from authoritative homes were better adjusted, more confident about their abilities, more competent in areas of achievement, and less likely than their peers to engage in deviant behavior. Adolescents who characterized their parents as authoritarian scored well on measures of obedience and conformity to standards of adults, did well in school, and were less likely to be involved in deviant activities. The authors theorized that these children had been overpowered into obedience and the price for the obedience was paid in their lower perceptions of their own abilities, self-confidence, and self-reliance. Youth from indulgent families were somewhat disengaged from school and showed a higher frequency of involvement in some deviant behaviors including drug and alcohol use, as well as school misconduct. Adolescents from indulgent homes were depicted as psychologically adjusted kids who were especially oriented toward their peers and toward social activities valued by adolescents. In strong contrast to the other three parent types, adolescents from neglectful families were consistently compromised, whether the index measured competence, self-perceptions, misbehavior, or psychological distress.

Results from a longitudinal study with 6,400 adolescents indicated that youth who described their parents as authoritative (warm, firm and democratic) reported better school performance and stronger school engagement then their peers (Steinberg & Lamborn, 1992). These authors concluded that authoritative parenting actually leads to school success and that non-authoritative parenting

appears to undermine the otherwise positive effect of parental encouragement to succeed.

In addition to linking parenting styles to child characteristics, researchers have also examined the effects of the verbal interaction between parents and their children. The quality of verbal interaction between a child and their parent is one indicator of the environment of the home. Blake and Slate (1993) describe that verbal abuse adversely affects self-concept, leaving emotional scars as devastating as those left after physical abuse. Gross and Keller's (1992) results indicated that psychological abuse is a more powerful predictor of depression and low self-esteem than is physical abuse. Solomon and Serres (1999) used a self-report measure with 94 fifth grade students that was designed to determine whether children had been subjected to verbal aggression, physical punishment, or both. Their results suggested that children who see themselves as having been the targets of verbal aggression perceive themselves as less competent in their school work, less comfortable with their own behavior, and feel generally less worthy.

Blake and Slate (1993) identified four components of parental verbal interaction that they felt influenced self-esteem: belittling and berating, non-support or the absence of approval, non-communication, and rejection/hostility. With a measure designed to operationalize these components, their results indicated that low levels of self-esteem correlated with inadequate positive and supportive communication as well as high levels of negative and defensive

parental communication. Parents whose children rated them as engaging in high levels of positive verbal interaction had children who liked themselves and who were more confident. Enger et al. (1994) also employed this measure of verbal interaction in their research and found that students with high self-esteem perceived their parents' communication as more positive than did students with lower self-esteem.

The bulk of the research suggests that parenting styles have tremendous impact on how children relate to their parents and peers, and how they function in their environment. The research on family interaction clearly indicates that children who report connected relationships with parents have lower anxiety, less depressive symptomatology, and higher self-worth than children who report detached relationships with parents. Additionally, when families are perceived as cohesive, organized and facilitative of expression, children exhibit more positive psychological functioning.

Statement of Problem

Psychologists and other trained examiners evaluate children through the use of intellectual and achievement measures on a regular and daily basis in a multitude of settings. However, despite the knowledge that these evaluations are academically and intellectually challenging, only a few studies have investigated children's responses to the experience of having intellectual and achievement tests administered. In the context of attempting to validate a new anxiety measure, Reynolds (1980) administered three anxiety tests to children prior to

administering a psychological evaluation. However, all three measures were administered prior to the evaluation so no anxiety measures were obtained post-evaluation. Swanson and Howell (1996) investigated test anxiety with 82 adolescents prior to the students taking the Stanford Achievement Test (SAT). Their study did not include the administration of individually administered intelligence tests, nor did it include any post-test anxiety measure.

Research examining the effect a psychological evaluation may have on child characteristics such as self-concept or anxiety is scarce. Additionally, the bulk of the literature on self-concept has been conducted with adolescents; few studies have evaluated elementary students. Although the debilitating effects of test anxiety can impact performance and have been an area of long-standing clinical concern (Zatz & Chassin, 1983) no research has assessed anxiety in children after they have psychological evaluations.

While self-concept is thought to be stable over time (March, 1980), academic situations that children experience in negative ways may impact the formation of self-concept more than researchers are aware. The failure to accomplish developmental tasks due to innate inability frequently lowers self-esteem (Jacobs, 1985) and leaves a child with the feeling, “I can’t get there from here,” (p. 211). This type of failure may begin to jeopardize other areas of functioning which have not previously been compromised.

Data support the connection between self-esteem and anxiety. Dorr, Pozner and Stephens (1985) demonstrated that self-esteem and anxiety tend to

be independent but reciprocal. Fourth, fifth, and sixth grade students who responded fearfully to “ego threats” tended to report lower levels of self-esteem (Dorr et al., 1985).

Based on the lack of research investigating the effects of assessment on children, it appears that there is an implied assumption that psychologists or examiners do no harm to children during intellectual and achievement evaluations. Without empirical evidence to corroborate this implied assumption, clinical practitioners and researchers may be operating under a misconception, failing to perceive any negative effects for the child being assessed as a result of these routine procedures.

During an evaluation, there are a variety of areas that may influence a child’s response to the evaluation situation. Locus of control may effect the way in which a child copes with a stressful situation. Research indicates that authoritative parenting styles produce more successful children (Lamborn et al., 1991). Finally, the type of rapport or relationship a child experiences with parents plays a large part in determining how the child functions with friends, at school and in the world. The goal of this research was to explore changes to a child’s self-esteem or anxiety level after the experience of a psycho-educational assessment.

Hypotheses

Hypothesis 1

It was hypothesized that students would report higher state anxiety scores on the post test anxiety measure than they reported on the pre-test anxiety measure. It was expected that this would be true for children, in both referral groups (TAG and SPED).

Hypothesis 2

It was hypothesized that students who had been referred to the TAG program would report less state anxiety after the evaluation than those who had been referred to SPED.

Hypothesis 3

It was hypothesized that lower pre-test general self-concept scores would predict higher state anxiety after the evaluation.

Hypothesis 4

It was hypothesized that lower pre-test academic self-concept scores would predict higher state anxiety after the evaluation.

Hypothesis 5

It was hypothesized that students who rated their parent/caregiver interactions as lower (more negative) would have lower general pre test self-concept scores.

Hypothesis 6

It was hypothesized that students who rated their parent /caregiver interactions as higher (more positive) would report lower state anxiety after the psychological evaluation.

Hypothesis 7

It was hypothesized that students who rated their parents as authoritative would have higher pre-test general self-concept scores than students who had rated their parents in the other three parent style groupings.

CHAPTER II

METHOD

Participants

Participants in this study were 75 fourth, fifth and sixth grade students attending 26 different elementary campuses in the Dallas Public Schools (DPS). The student participants were recruited after being referred for possible placement in the Talented and Gifted Program (TAG) or after being referred for evaluation and possible placement in Special Education (SPED). Students who obtained intelligence scores in the mentally deficient range, Full Scale Intelligence Quotient of less than 70 as measured by the Wechsler Intelligence Scale for Children - Third Edition (Psychological Corporation, 1991) were not included in the analysis.

To avoid language comprehension confounds caused by limited English proficiency, students were not recruited for the SPED referral group if they spoke other languages. TAG referral students were recruited for the study when they were speakers of other languages if they had obtained scores above the 75th percentile on the Language Total of the Iowa Tests of Basic Skills (ITBS) a standardized test of academic English skills. Different criteria for these two referral groups resulted in the inclusion of numerous bilingual students in the TAG referral group and no bilingual students in the SPED referral group. The

breakdown of demographic variables based on referral type, sex, grade, and ethnicity is listed in Table 1.

Measures

Several self-report measures were used as independent and dependent variables to estimate the child's locus of control, self-concept, relationship/interaction with parent or primary caregiver, and anxiety. Demographic variables such as the child's birthdate, sex, ethnicity, grade in school, and type of referral (SPED or TAG) were obtained from the examiners and research assistants assisting in this research.

Anxiety. The State-Trait Anxiety Inventory for Children, (STAIC) a useful measure of state and trait anxiety in children from kindergarten through 6th grade (Papay & Spielberger, 1986), was used in this research. Only the A-State scale (STAIC-A) was administered to assess temporal anxiety. The STAIC-A scale assesses the intensity of a child's feelings of tension, apprehension, nervousness and worry at a given time (Papay & Spielberger, 1986). Each STAIC-A item begins with the stem " I feel," followed by three alternative endings containing a key descriptive term, (e.g., "worried"). The child responds by checking the alternative that best describes how he/she feels "right now, at this very moment," (e.g., Item 9: "I feel - very worried - worried - not worried"). The instructions for the STAIC-A scale may be modified to permit the evaluation of state intensity for situations or time intervals that are of special interest to researchers (Spielberger, 1973).

The norm group for the STAIC consisted of 1,500 students in grades 4, 5, and 6 from four different counties in Florida. Some schools had a predominantly African-American student body. This resulted in 35 to 40 percent African-American students within the total norm sample. Alpha reliability of the STAIC-A with the norm group was .82 for males and .87 for females. For the current research the STAIC-A was administered to participants three times. Alpha reliabilities were calculated and resulted in .83, .85, and .88, respectively, for the three administrations.

Self-esteem/self-concept. To assess personal self-concept, the Self Description Questionnaire I (SDQ-I) was used (Marsh, 1990). The SDQ-I has undergone factor analysis, and multitrait-multimethod analysis. Research has yielded support for its multidimensional and hierarchical organization. The SDQ-I is designed to measure self-concepts for children and was conceptualized and developed to measure self-concept in non-academic, academic and general areas, allowing researchers to assess a person's perception of their abilities in a variety of domains.

The SDQ-I measures specific areas of academic self-concept in children. Thus, the academically challenging experience of being evaluated with intellectual and achievement measures was directly linked to four of the 11 SDQ-I subscales. There are 76 items on the SDQ-I and children are asked to respond to simple declarative sentences (e.g., "I'm good at mathematics", "I make friends easily") with one of five responses (e.g., false, mostly false, sometimes

false/sometimes true, mostly true, true). The 11 subscales are Physical Abilities, Physical Appearance, Peer Relations, Parent Relations, Reading, Mathematics, General School, General Self, Total Non-Academic, Total Academic and Total Self. Additionally, there are six control scores which were designed to provide a measure of validity for individual student responses. These scores provide information on inconsistency between correlated paired items, consistency between uncorrelated pair items, negativity bias, positivity bias, and an individual profile variation. The use of these scores is optional but suggested when there are suspicions that a child has not responded appropriately.

Testing time for the measure varies but may average 15 to 20 minutes (Marsh, 1990). The SDQ-I is suitable for children as young as 2nd grade and, with appropriate modifications, for older students through high school (Marsh, 1990). Internal consistency reliability estimates for the various scales and total scores are all in the .80's and .90's (Marsh, 1990). Alpha reliability internal consistency scores were calculated on the subscales that were used in this study. The scores for the Reading, Math, General Self, and General School scales were .91, .93, .86, and .84 respectively. Alpha reliability consistency scores were also calculated on the responses to these same four subscales upon re-administration on a different date. These scores were .47, .39, .27, and .46, respectively.

Locus of Control. To determine locus of control, the Measure of Children's Perception of Control (MMCPC), was used (see Appendix A). As mentioned previously, this measure examines developmental change and different ways children understand control within domain specific dimensions. The MMCPC is a 48-item instrument that measures children's perceptions of control in four domains: cognitive, social, physical and general (Connell, 1985). Additionally, the MMCPC offers the assessment of both what children know about whose attributes control their success and failures as well as what they do not know about why they succeed and fail. The items are declarative statements using a four point Likert format for endorsement including very true, sort of true, not very true, not at all true. A sample internal control item is "If I want to do well in school, it's up to me to do it." Each item is scored from 1 to 4, where "very true" is scored 4, and indicates high endorsement of the source of control presented in the statement. Perceptions of control over success outcomes and failure outcomes are assessed separately.

The MMCPC was established from factor analytic procedures, the use of internal consistency analyses and comparison of questionnaire responses with responses children gave in structured interviews. A sample of 355 students in third through sixth grade yielded alpha reliabilities from .70 to .52. which is similar to other locus of control measures (Nowicki & Strickland, 1973). Domain scale alpha reliability scores for the current sample were calculated and yielded .59, .60, .79, and .48 cognitive, general, physical, and social domains respectively.

Parenting Style. To categorize the students' parents into recognizable parent style groups, the Index of Parenting Style (IPS) (see Appendix B) was used (Lamborn et al., 1991). This questionnaire contains 24 items on parenting practices that have been taken or adapted from existing measures. Based on previous work (Steinberg et al., 1989) several items were selected to correspond with dimensions of parenting. The acceptance/involvement and strictness/supervision domains were selected for use in this study. Items 1-15 make up the acceptance/involvement scale and items 16-24 make up the strictness/supervision scale. The psychological autonomy dimension mentioned by Lamborn et al. (1991) was not used since the students for this sample were distinctly younger than earlier samples and therefore in a different developmental stage.

The acceptance/involvement scale measures the extent to which a child perceives his or her parents as loving, responsive and involved, with items such as: "I can count on them to help me out if I have some kind of problem." Alpha reliability for the acceptance/involvement dimension with 4,100 14-18 year olds attending schools in Wisconsin and California was .72 (Lamborn et al., 1991).

The strictness/supervision dimension assessed parental monitoring and supervision of the child with items such as: "My parents know exactly where I am most afternoons after school." Some of the items relating to curfew hours were adjusted for the elementary age sample in this study. Alpha reliability for the strictness/supervision domain with the Lamborn et al. sample was .76. Alpha

reliability was calculated for the students in this study, and resulted in .48 for the parent warmth and involvement dimension and .71 for the strictness and supervision dimension.

Verbal Interaction. To assess family interaction and/or a child's perception of their verbal interaction with their primary and secondary caregivers, the Parent Verbal Interaction (PVI) questionnaire was used for this study (see Appendix C). The PVI is a self-report measure which consists of thirty statements. A three point Likert scale is used to describe how parents verbally interact with their children. The alpha reliability of this measure with a sample of 197 southern, rural, and predominantly white, high school students was .95 (Blake & Slate, 1993; Enger et al., 1994), indicating a high degree of internal consistency. Alpha reliability was calculated for students in this research and resulted in a Guttman split-half score of .91 for the female/primary caregiver scale and .92 for the male/secondary caregiver.

Items are answered with three possible choices, "often," "sometimes," and "never." All the declarative statements use the same Likert scale choices. The child was asked to specify their relation to the persons they conceptualized when answering the items, for example, "grandmother," or "step-father." Most students reported on biological mothers and fathers as primary and secondary caregivers (see Table 1). The higher the score obtained, the better the perceived interaction between the child and their caretaker.

Intelligence. The Wechsler Intelligence Scale for Children - Third Edition (WISC-III) (Psychological Corporation, 1991) is a popular and well validated intelligence scale for children, allowing assessment of intellect from age 6 to 16 (Sattler, 1992). The WISC-III was standardized on 2,200 children in four geographical regions of the United States matched closely to census data from 1988. The WISC-III consists of 13 subscales, with 6 Verbal Scale subtests and 7 Performance Scale subtests. The Verbal subscales are Information, Similarities Arithmetic, Vocabulary, Comprehension, and Digit Span. The Performance subscales are Picture Completion, Coding, Picture Arrangement, Block Design, Object Assembly, Symbol Search and Mazes. From these subtests, a Full Scale Intellectual Quotient, a Verbal Intellectual Quotient, and a Performance Intellectual Quotient are yielded. WISC-III reliability is considered outstanding, as the three scales have reliability coefficients of .89 or above for the entire age range covered by the standardization group.

Achievement. The Wechsler Individual Achievement Test (WIAT) (Psychological Corporation, 1992) is the companion achievement measure for Wechsler Intelligence Scales. The WIAT was correlated with other achievement measures across a variety of individually and group administered tests. The standardization sample consisted of 4,252 children in 13 age ranges from 5 years through 19 years, and matched by the census data from 1988. The subtests included in the WIAT are Basic Reading, Mathematics Reasoning, Spelling, Reading Comprehension, Numerical Operations, Listening

Comprehension, Oral Expression and Written Expression. These subtests are combined to yield six composite scores including Reading, Mathematics, Language, Writing, Screener and Total.

Procedure

Authorization from the Institutional Review Board at the University of North Texas and from the Office of Institutional Research of the Dallas Public Schools was obtained prior to data collection.

Students in Dallas Public Schools are typically referred to the TAG program by either a faculty member or a parent. The screening process TAG students experience prior to placement involved the completion of questionnaires and at times a brief non-verbal intelligence test, typically administered by TAG teachers. The actual procedure varies by campus. Subsequent to the screening, a faculty committee at the student's campus makes a formal recommendation for placement in TAG. Similarly, students referred to SPED are usually referred by a faculty member and then have a formal psycho-educational evaluation. A committee reviews results of the assessment to determine eligibility for SPED services.

Students were recruited to participate in this study only on campuses where principals had given approval for data collection to occur. The researcher contacted parents of the students via letters, phone calls and/or home visits. Information about the project and two copies of the appropriate consent form (see Appendices D, E, & F) were provided to the parents. If the consent form

was returned with signatures to the researcher, the student was enrolled in the project.

When the consent form was returned, a research assistant was assigned to conduct the interview with the student. Research assistants were undergraduate students majoring in Psychology at the University of North Texas (UNT). The research assistants were trained by the researcher to administer the self-report measures used for the current research and were provided with specific instructions for completing the interview (see Appendix G). The interviews occurred at the participants' school campus during school hours and lasted approximately 45 minutes. Research assistants began by reading the Child Assent Form (see Appendix H) to students and requesting that they sign the form if they wished to participate in the study. Upon obtaining the student's signature and assent, the research assistants read all the interview measures which included, in order of administration, the STAIC-A, the SDQ-I, the MMCPC, the IPS and the PVI to the student participants and marked the responses the students endorsed.

On a different date, after the interview was completed, students were tested with intelligence and achievement measures by trained examiners. The students in the TAG referral group were tested by graduate student psychology examiners who were supervised by faculty at the UNT Psychology Department. The graduate students were also provided with specific instructions to complete the test session (see Appendix I). A brief report which summarized the child's

strengths and weaknesses was returned to parents and, when requested, results were presented at a face to face meeting with the researcher.

Students in the SPED referral group were tested by DPS employees of the department of Psychological, Social and Diagnostic Services (PSDS). Nine of these examiners were licensed psychologists and seven were licensed educational diagnosticians. Several examiners tested more than one student. Specific instructions were provided for the examiners working for the public school district (see Appendix J). The psychological evaluation for these students was not completed for the benefit of this research, but in a naturalistic setting that would have occurred whether or not the student was enrolled in this study.

During the testing session, which was completed in one day, students were administered the STAIC-A at the start of the test session. Immediately after the administration of the WISC-III and the WIAT, the STAIC-A was administered again. The last measure given to student participants during the test session was composed of 32 items from the SDQ-I which comprise the Reading, Math, General School and General Self subscales. The test session process and the measures given to both referral groups were the same so comparisons could be made between the two groups. None of the interviewers or examiners at UNT and DPS were compensated financially for the assistance they provided with this project.

CHAPTER IV

RESULTS

Preliminary Data Analysis

Data Analysis began with an examination of the distributional characteristics of the variables. Results of the evaluation of assumptions of normality were satisfactory. The skewness and kurtosis of the distributions were also evaluated and found generally satisfactory. Alpha reliability internal consistency scores were calculated on the scales where appropriate.

Independent variables used in this study included student referral type, pre-test anxiety scores, and parenting style group. Dependent variables included pre-and post-test anxiety scores, general self concept scores, and academic self concept scores. Predictor variables were general self-concept, academic self-concept, and parent verbal interaction. Means and standard deviations of the self-concept variables by referral group and with all participants are included in Table 2. Intercorrelations for the self-concept subscales are listed in Table 3 and 4. This study employed Analysis of Variance (ANOVA), t-tests, and multiple regression analysis. SPSS was used for all analyses. Means and standard deviations of the locus of control subscales are listed by referral group and for all participants in Table 5, and intercorrelations for the locus of control sub-scales are listed in Table 6.

Descriptive Statistics

Although there were a total of 75 student participants, data on only 58 students was utilized to analyze hypotheses one through six, since these hypotheses required the use of data from both the interview and the test session. Hypothesis seven employed only data that was derived from the interview and therefore was calculated by including data on the 74 subjects who were interviewed. Data on the remaining 17 students was not used for a variety of reasons. For example, one SPED referral student obtained a Full Scale IQ of 66, and that data was not included in any analysis due the subject's questionable ability to comprehend the self-report measures. This is the reason for the difference between the total number of participants (75) and the number of subjects whose data was interpreted (74). Additionally, there were occasions when test sessions were attempted with students but due to circumstances beyond the control of the researcher or examiner, testing was not completed in one day. It was felt that including this data would not accurately describe possible changes in temporal "state" anxiety resulting from a psychological evaluation. To explore the relationship between self-report variables intercorrelations between sub-scales were run and are listed in Table 7.

Hypothesis Testing

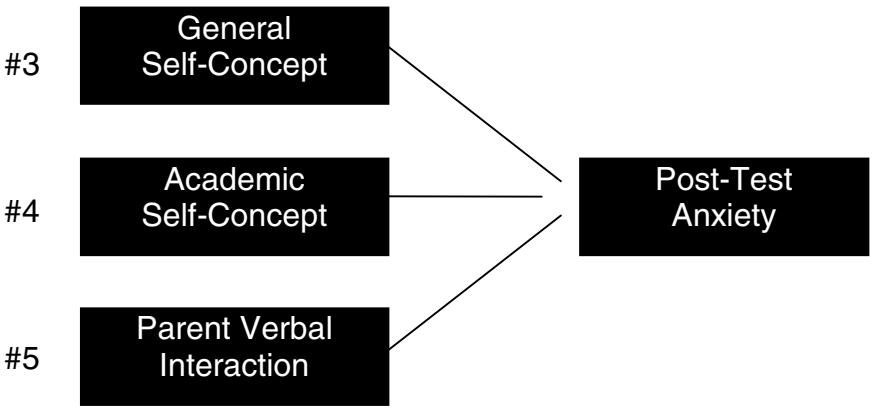
Hypothesis 1. The first hypothesis predicted that students pre-test anxiety would be lower than their post-test anxiety. It was expected that this would be true for all students without distinction between referral type. It was expected that student's anxiety would increase after having a psycho-educational assessment

due to the intellectually and academically challenging tasks required during an assessment. To test this hypothesis, a repeated measures ANOVA was used to compare total STAIC-A scores (see Table 8). The STAIC-A administration at the start of the interview session was considered time one (T_1), the STAIC-A administration at the start of the test session was time two (T_2), and the STAIC-A administration after the test session was time three (T_3). Results indicated that there was a significant difference among anxiety levels for the three STAIC administrations $\underline{F}$ (2,53) = 6.77 p = .002).

Tukey post hoc analyses were run to find differences between the three STAIC-A mean scores. Results suggested that there was no difference between (T_1) and (T_2), indicating that students anxiety at the start of the interview session was not significantly different than their anxiety at the start of the test session. A difference was found between (T_1) and (T_3), suggesting that students were significantly more anxious at the start of the interview than they were at the end of the test session. Additionally, there was a significant difference between (T_2) and (T_3) indicating that students were more anxious at the start of the test session than they were at the end of the test session. This trend was consistent across groups (TAG and SPED) and between grade levels. These results indicate that students anxiety at the start of the interview and at the start of the test session was equal, but significantly higher than the anxiety they reported at the end of the test session.

Hypothesis 2. The second hypothesis stated that students who had been referred to the TAG program would report less state anxiety after the evaluation than students who had been referred to SPED. A T-test was used to determine a difference between the mean (T_3) STAIC-A scores of the TAG group M = 27.07 and of the SPED group M = 27.67. The mean scores were not statistically different t (42) = -.41, p = .68, indicating that hypothesis 2 was not supported by the data.

Hypothesis 3, 4, and 5. Hypothesis 3, 4, and 5 were tested by using path models because all four hypotheses employ the same dependent variable. The path model for hypotheses 3, 4, and 5 are shown below.



Hypothesis 3 stated that lower pre-test general self-concept scores would predict higher state anxiety after the psycho-educational evaluation. Hypothesis 4 stated that lower pre-test academic self-concept would predict higher state anxiety after the evaluation. Hypothesis 5 predicted that students who had rated their caregivers interactions as more positive would report lower state anxiety after the evaluation. The Parent Verbal Interaction measure was used by totaling

the verbal interaction scores. Scores of students from two-parent homes were averaged, and for children in single parent homes, only the score for the single parent was used.

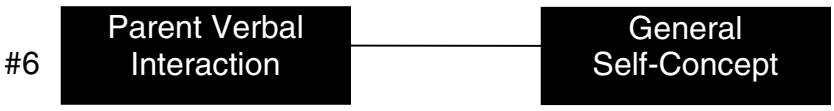
Colinearity diagnostics indicated the existence of a multi-colinearity problem among the predictor variables since the variance inflation factor (VIF) for all three variables was greater than one: general self (VIF = 1.45), academic self-concept (VIF = 1.20), and parent verbal interaction (VIF = 1.25). It was assumed that the multi-colinearity problem existed between parent and general self-concept because of the formation of the model. To investigate this, general self-concept was removed from the analysis and the multiple regression was run again. With general self-concept removed, the variance inflation factor for academic self-concept and for parent verbal interaction was (VIF = 1.03). These results indicate that without general self-concept (VIF = 1.03) the VIF scores of two remaining predictors were much closer to 1.00 and thus, the multi-colinearity problem was resolved. Additionally, the adjusted r square value for the second regression increased to (R^2 = .088).

However, hypothesis 3 suggesting that pre-test general self concept scores would predict post-test anxiety was not supported since general self-concept was not a direct predictor of post test anxiety (β = -.03, $\underline{p}$ =.82).

Hypothesis 4, which stated that lower pre-test academic self-concept would predict higher post-test state anxiety was supported. Pre-test academic self-concept significantly predicted post-test anxiety, standardized beta, ((= -.26,

p =.04), however, when the effect of pre-test anxiety was controlled, the relationship between academic self concept and anxiety was no longer significant. Thus, the significance in the original regression appears to be due to pre-testing anxiety and academic self-concept does not significantly predict post-test anxiety.

Hypothesis 5 which stated that parent verbal interaction would predict lower state anxiety was not supported, since parent interaction was not a significant predictor of post test anxiety (β = -.19, p = .16).Hypothesis 6 suggested that students who rated their caregiver interactions as more negative (lower) would have lower general pre-test self-concept scores, or that parent verbal interactions would predict general self-esteem. The model for hypothesis 6 is shown below.



The relationship between general self-concept and parent caregiver interaction was evaluated by regressing general self-concept onto parent caregiver interaction, (β = .13, p =.01). Parent caregiver was a significant predictor of general self-concept, supporting hypothesis 6.

Hypothesis 7. Hypothesis 7 stated that students who had rated their caregivers as authoritative would demonstrate higher general self-concept scores than students who had rated their caregivers in the other three parenting

categories. A one way ANOVA was used to test this hypothesis using the Index of Parenting Style scores as the independent variable and general self-concept score students endorsed during the interview as the dependent variable. Because all data necessary to test this hypothesis was derived during the interview, data on 74 students was used for this analysis. The IPS dimensions, warmth/involvement and strictness/supervision were standardized as the measure contained a variety of item types (three point Likert scale, five point Likert scale, and true false items).

When Lamborn et al. (1991) used the IPS with a sample of over 4,000 subjects, the results were trichotomized and excluded all scores that fell in the middle tertiles of each dimension. However, when they performed the analyses using a median split procedure to detect differences, the results did not change substantially (Lamborn et al.).

For the current research sample, a median split procedure was chosen and students were assigned to one of the four parent style categories based on the scores each student had endorsed and whether the scores were above or below the median on each dimension. Students placed in the Authoritative group had endorsed scores above the median on both the warmth/involvement dimension and the strictness/supervision dimension. Students in the authoritarian parent group had endorsed scores lower than the median on the warmth/involvement dimension, but scores above the median on the strictness/supervision dimension. Students in the Indulgent parent group had

demonstrated scores above the median on the warmth/involvement dimension, but scores below the median on the strictness/supervision dimension. Students in the Neglectful parent group had demonstrated scores below the median on the warmth/involvement dimension and on the strictness/supervision dimension.

The differences between the means on the general self-concept measure were not significantly different between the four parenting group categories $F(3,54) = 1.48$, $p = .231$). Authoritative parenting group general self-concept mean score ($M = 36.04$; $SD = 3.34$), Authoritarian parenting group general self-concept mean score ($M = 36.04$; $SD = 4.17$), Permissive parenting group general self-concept mean score ($M = 32.73$; $SD = 8.55$), Neglectful parenting group general self-concept mean score ($M = 32.58$; $SD = 4.70$) Since the mean self-concept scores were not statistically significant, the data did not support this hypothesis(see Table 9). Therefore, students who had rated their caregivers as authoritative did not differ significantly in general self-concept from students who had rated their parents in the other three parent style categories.

Exploratory Analysis

Although a specific hypothesis was not proposed regarding changes between interview and post-test self-concept subscale scores and for the reading, mathematics, general school, and general self-concept subscales, this data was analyzed. T-tests were run to determine changes in these subscales after the psychological evaluation. While there were decreases in each of the subscale totals at the post-test, administration, the only sub-scale that reached a

level of significance was the general school subscale at interview administration (M = 29.50) compared to post-test administration (M = 27.74) (t = 2.11, p = .04) . This indicated that students had significantly lower general school self-concept after experiencing a psycho-educational assessment.

Additional regression analyses were calculated with the locus of control measure by regressing the cognitive domain total score (β = .008, p =.963), the general domain total score (β = -.013, p =.935), the physical domain total score (β = -.045, p =.965), and the social domain total score (β = -.129, p =.348) onto the STAIC-A (T_3) anxiety measure. None of the locus of control domain subscales significantly predicted post-test anxiety. Additionally, the locus of control results appear to indicate that students referred to SPED have greater variability in their endorsement of locus of control domains. The standard deviations for the SPED sample was consistently larger than that of the TAG sample.

CHAPTER IV

DISCUSSION

This investigation involved the examination of anxiety and self-concept in fourth, fifth and sixth grade students both before and after experiencing a psycho-educational assessment. Psychosocial variables, which included the student's perceptions of their relationships to primary caregivers, were gathered on a date prior to the psycho-educational evaluation. Findings included initial evidence that psycho-educational assessments do not result in increased anxiety in students after the test session, potentially beneficial findings for psychology and psychometric professionals who evaluate children daily. Students endorsed decreased anxiety after the evaluation was completed rather than increased anxiety, suggesting that fear of unknown situations may be more anxiety provoking than the actual situation itself. Additionally, negative verbal interaction with parents significantly predicted lower general self-concept scores, providing evidence that the manner in which parents verbally relate to their children may have significant impact for the mental health of children.

Anxiety

Reynolds (1980) investigated anxiety in children before psychological evaluations in previous research. However, changes in anxiety as a result of the assessment were not examined in his study. When Swanson and Howell (1996)

investigated test anxiety in students who were about to take the SAT there also were no post-test measures of anxiety administered to the students. Thus, previous efforts toward understanding anxiety in the course of psycho-educational assessment have not assessed anxiety upon completion of the assessment process.

The results of the current study give clinicians previously unavailable, empirical information about the impact a psycho-educational evaluation has on the level of anxiety students experience before and after an evaluation. It was hypothesized that students anxiety would increase after an assessment due to the intellectually challenging and academically demanding aspects of a psycho-educational evaluation. In fact, the data indicated the opposite effect. Students were significantly less anxious upon completion of the assessment than they had been at the start of the session. Neither were there significant differences on the anxiety measure between the three grade levels. It was also expected that anxiety scores endorsed for this study might be markedly inflated as a result of the evaluation process. This was also not the case. The results of this research indicated that although students endorsed anxiety before and after the evaluation at significantly different levels, the means and standard deviations of responses by students in this study were comparable to those obtained in the norming sample for the anxiety measure used in this research (Spielberger, 1973).

Additionally, the anxiety students endorsed was not impacted significantly by referral group, TAG versus SPED. In previous research, investigators have noted that children with learning disabilities exhibit higher levels of test anxiety than their peers without disabilities (Bryan, Sonnefeld & Grabowski, 1983; Swanson & Howell, 1996). Although the data from the current study did not support this trend, it may be related to the fact that the students recruited for the project had not been formally diagnosed or given an eligibility of learning disabled. In fact, since participation in this study occurred during the evaluation process, it is possible that several of the participants were not subsequently diagnosed as learning disabled as a result of the assessment. Conversely, it may be that children with learning disabilities experience more anxiety in classroom testing sessions rather than in one-on-one psycho-educational testing.

This empirical examination of anxiety before and after psycho-educational assessment indicates that psycho-educational evaluations did not result in high anxiety scores after the assessment. In fact, students' anxiety appeared to decrease upon completion of the assessment. One possible explanation may be that lower levels of anxiety are attributable to the perception by the student that the experience is finally at an end. Relief about the end of the task may be responsible in part for the decrease in anxiety scores. Additionally, children may mentally exaggerate what will occur during an evaluation with fear of the unknown as the central theme. Reduction of anxiety would then follow once the child knows what the assessment involves. Although less likely, the possibility

also exists that psychological evaluations are not particularly stressful or anxiety provoking for children. Studies designed to derive qualitative information from children regarding their perceptions might be useful to investigate this possibility. Structured interviews or open-ended questions given before and after psycho-educational assessments would further examine this possibility. Without more data, however, it is only possible to surmise from this research why the anxiety children report is not increased after a psychological evaluation. Although these results are initial findings, it may indicate good news for psychologists and professional examiners who must evaluate children frequently in the course of their professional duties.

Self-Concept

Marsh (1990) has stated that self-concept is relatively stable over time. The SDQ-I has been used extensively to investigate the effects of intervention programs designed to improve self-concept by measuring self-concept before and after interventions. When specific dimensions of self-concept are relevant to an intervention, the SDQ has been effective in the documentation of increases in self-concept. The current research employed this measure to investigate the existence of decreases in self-concept after a psycho-educational assessment. This measure was employed because it delineates specific dimensions of self-concept. These analyses would not have been possible with a global measure of self-concept.

The means and standard deviations for all the SDQ-I subscales and control scores were comparable to those provided by Marsh (1990). However, the use of four subscales which were administered as a short form post-test measure for reading, math, general-school and general-self concept was of questionable value as the alpha reliability internal consistency scores were substantially lower than those obtained when the measure was administered in its entirety. Since the internal consistency scores were so different upon re-administration, it is possible confusion played a part in the lower scores. Although it could have been fatigue as well, this appears less likely as the post-test anxiety measure did not suffer a similar decrease in reliability and was administered immediately prior to the administration of the self-concept post-test measure. Further investigation to determine reliability for subscales from this measure administered alone would be appropriate before attempts to utilize the measure in a similar manner are pursued.

Locus of Control

The results obtained from regressions calculated with the locus of control measure indicated that none of the locus of control domain sub-scales significantly predicted post-test anxiety. Additionally, the locus of control results appear to indicate that SPED referral students demonstrate more variability than TAG referral students when attempting to define who or what controls what happens to them. Perhaps frustrating academic experiences cause students to have less certainty about attributions for events in their lives.

Parent Characteristics

The connection between a child's self-concept and their relationship to their primary caregivers has been examined extensively (Delaney, 1996; Givelber, 1985; Hojat, et al., 1990; Lamborn, et al., 1991; Powell, et al., 1995). The current study used measures of self-concept and anxiety to investigate the impact that parent style and verbal interaction with parents had on student's self-concept. By utilizing both broad and specific measures of student's perceptions of their parents, it was possible to investigate the impact of these relationships in different dimensions.

The hypothesis that poor parent verbal interactions would predict lower self-concept was supported. The trend toward investigating the verbal interactional patterns between parents and children is increasing, as indicated by recently designed scales to measure the verbal patterns between parents and their children (e. g., Blake & Slate, 1993; Solomon & Serres, 1999). Solomon and Serres investigated verbal interaction with parents in conjunction with a self-esteem measure and characterized harsh or poor verbal interactions as verbal aggression. Their findings revealed that children who reported frequent verbal aggression from primary caregivers perceived themselves as less competent than those who reported less verbal aggression. The results of the current research support Solomon and Serres' findings that poor verbal interaction with parents predicts lower general self-concept. Understanding how verbal interaction with parents interacts with children's general self-concept is important

as researchers seek a more complete understanding of what assists and impedes children in their development toward adulthood.

Hypothesis 6, which suggested that positive parent verbal interaction would predict lower anxiety was not supported by the current research. Although positive verbal interaction with parents provides students with a better foundation for self-concept, it may not buffer them from anxiety in stressful academic situations. Thus, students with good parental relationships may still experience increased anxiety in challenging academic situations.

Although hypothesis 7, which stated that children who categorized their parents as Authoritative would have higher general self-concept, was not supported, data analysis revealed a great amount of variability within the Permissive parent group. These results may suggest the need to refine the measure of parenting style when it is used with younger students who are less likely than adolescents to portray their parents negatively (Solomon & Serres, 1999). As this measure contained several items which were answered “true” or “false”, younger children may have more difficulty differentiating parenting practices when provided with only two choices for some items, resulting in poor categorization between parenting groups.

Limitations of the Current Research

The current study was limited by a variety of factors. One important problem was the large number of individuals who acted as data collectors. There were a total of 9 persons who conducted interviews and 19 persons who

collected test session data. While this study could not have been done without the generous assistance of those 28 individuals, it is possible that the variability inherent in utilizing so many different data collectors might have altered results. Nevertheless, multiple examiners are typically employed by large school districts to administer evaluations. Thus, such variability is often part of the assessment process, even though it makes well controlled experimental designs more problematic.

Another possible limitation of this study involved whether accurate responses were received from students relating to their relationships with their parents. Confidentiality was guaranteed to parents (see Appendices D, E and F) that their child's data would not be used individually or revealed to anyone but the primary researcher. The child assent form (see Appendix H) explained to students that they were taking part in a voluntary project and that they could choose not to participate at any time. The child assent form also explicitly stated that if a child decided not to participate in the study, no individuals would be angry or upset at the decision. However, it was not explicitly stated that self-report information would not be given to parents or teachers. In most cases, students were aware that their caregivers had spoken to the primary researcher about the nature of the study, and they were aware of the direct connection between the primary researcher and the data collectors. Additionally, the parent verbal interaction questionnaire was extremely face valid. A sample item is "my mother/father has threatened to slap, hit or beat me." Given the omission on the

child assent form of an explicit statement regarding release of information to parents after the interview, and given that specific questions about negative parenting practices were asked, children may have been less than forthright with their responses.

Another limitation of this research involved the measure of Parenting Style. As mentioned previously, the measure included a variety of different item types including 11 items with a three point Likert scale, two items with a five point Likert scale, and 11 true/false items. Refinement of this measure by employing similar Likert scales for all items might provide better distinctions on items that currently are true/false choices, such as, “I can count on my mother to help me out if I have some kind of problem”, may result in finer distinctions between the two dimensions and the four parenting groups derived from the dimensions.

Comparisons between the means and standard deviations of the IPS scores from the current research and the Lamborn et al. study were made. The data from this study showed less variability than was noted by Lamborn et al. which could be attributed to the adolescent age ranges (14 to 18 year olds). The subjects of this research were much younger, typically between the ages of 9 and 12 years old. According to Solomon and Serres (1999), children in this age range are less likely than adolescents to perceive and portray their parents negatively. It is possible that younger students who are less likely to see their parents negatively might need a measure that offers more item discrimination. Despite these issues, the percentage of students assigned to parent style

grouping in the current study was very comparable to the percentages yielded in the Lamborn et al. study, indicating that the breakdown into parenting style groups was fairly consistent between the two samples.

Finally, future research should focus on the construct of locus of control. Although not an integral part of the hypotheses, exploratory analyses were conducted to determine whether the four main domains of locus of control, cognitive, general, social and physical are related to post-test anxiety or general self-concept. These results were not significant, suggesting locus of control domains do not predict anxiety of self-concept. However, the lack of findings should be interpreted cautiously, and should be the focus of subsequent research.

Future Implications

Further investigation of anxiety during the course of psycho-educational assessment can provide more information about ways in which anxiety impacts students during an evaluation and what, if anything, practitioners need to do about it. Since there are now scales available that strive to measure the construct of test anxiety (Friedman & Bendas-Jacob, 1997) as compared to anxiety in a more general form, future studies might want to incorporate these measures into research efforts investigating anxiety during psycho-educational assessment.

Additionally, researchers might want to investigate differences between ethnic/cultural groups and overall anxiety trends during psycho-educational

assessment. The bulk of the students in this study were ethnic minorities, in large part due to the make-up of the school district where the research was conducted. The Dallas Public School District is commonly know as a minority-majority district in that the majority of the students enrolled have been identified as ethnic minorities. No hypotheses were suggested relating to ethnicity or cultural factors because such questions were beyond the intent and scope of this project. However, it is possible that the exclusion criteria which prevented the enrollment of bilingual students in the SPED sample, may have in some way altered the results of the study. The exclusion criteria resulted in a majority of Hispanic students in the TAG sample (30%), and a majority of African-American students in the SPED sample (31%). With such an unintended but discrepant ethnic make-up between the two groups, it is possible that both the supported and un-supported hypotheses are simply artifacts or confounding factors relating to differences between anxiety in ethnic groups. If certain cultural groups demonstrate higher levels of anxiety when compared to other cultural groups, or when engaged in one-on-one test situations, that may have effected the current results. Similarly, potential differences among ethnic minorities on measures of general self-concept and/or other forms of self-concept may have contributed to the results obtained in the current study. Future research with an emphasis on anxiety and self-concept among different ethnic groups might provide illumination on the effects of psycho-educational testing on anxiety and self-concept.

Another possible area of interest to researchers might be the effect a history of grade retention or academic failure has on student's academic self-concept. This information was not included in the current study since it was also beyond the scope of this project and such data was not available to the researcher. Many students referred to Special Education have a history of retention. Thus, empirical studies designed to investigate the impact grade retention has on academic self-concept could provide helpful information to psychologists and teachers as they work and interact with these students.

Final Conclusions

This study has provided initial empirical information that the impact of psycho-educational evaluations on school age children is more anxiety provoking before the session begins than after the session has ended. This research is groundbreaking as the effects a psycho-educational assessment has on children has not previously been investigated. While the hypothesis suggesting anxiety would increase after the session was not supported, these findings represent positive information for psychologists and professional psychometricians who frequently evaluate different children each day of the week. With such a large number of students having assessments administered, the current results are indeed relevant and timely. Additionally, the current research supported previous findings regarding verbal interaction between parents and their children, indicating that negative verbal interactions predict lower general self-esteem scores in children. In fact, other researchers have suggested that negative verbal

interaction can also be considered verbal aggression. With aggression becoming a more frequent issue, the results of the current study are relevant not only to psychology professionals, but to parents everywhere who hold primary responsibility for the care, guidance and support of their children.

APPENDIX A

MULTIDIMENSIONAL MEASURE OF CHILDREN'S PERCEPTION OF CONTROL (MMCPC)

		1	2	3	4
1.	When I win at a sport, I can't figure out why I won.	☐	☐	☐	☐
2.	When I am unsuccessful, it is usually my own fault.	☐	☐	☐	☐
3.	The best way for me to get good grades is to get the teacher to like me.	☐	☐	☐	☐
4.	If somebody doesn't like me, I usually can't figure out why.	☐	☐	☐	☐
5.	I can be at good at any sport if I try hard enough.	☐	☐	☐	☐
6.	If an adult doesn't want me to do something I want to do, I probably won't be able to do it.	☐	☐	☐	☐
7.	When I do well in school, I usually can't figure out why.	☐	☐	☐	☐
8.	If somebody doesn't like me, it's usually because of something I did.	☐	☐	☐	☐
9.	When I win at a sport, it's usually because the person I was playing against played badly.	☐	☐	☐	☐
10.	When something goes wrong for me, I usually can't figure out why it happened.	☐	☐	☐	☐
11.	If I want to do well, it's up to me to do it.	☐	☐	☐	☐
12.	If my teacher doesn't like me, I probably won't be very popular with my classmates.	☐	☐	☐	☐
13.	Many times I can't figure out why good things happen to me.	☐	☐	☐	☐
14.	If I don't do well in school, it's my own fault.	☐	☐	☐	☐
15.	If I want to be an important member of my class, I have to get the popular kids to like me.	☐	☐	☐	☐
16.	Most of the time when I lose a game, in athletics, I can't figure out why I lost.	☐	☐	☐	☐
17.	I can pretty much control what will happen in my life.	☐	☐	☐	☐
18.	If I have a bad teacher, I won't do well in school.	☐	☐	☐	☐
19.	A lot of times I don't know why people like me.	☐	☐	☐	☐
20.	If I try to catch a ball and I don't, it's usually because I didn't try hard enough.	☐	☐	☐	☐
21.	If there is something that I want to get, I usually have to please the people in charge to get it.	☐	☐	☐	☐
22.	If I get a bad grade in school, I usually don't understand why I got it.	☐	☐	☐	☐
23.	If somebody likes me, it is usually because of the way I treat them.	☐	☐	☐	☐

		1	2	3	4
24	When I lose at an outdoor game, it is usually because the kid I played against was much better at that game to begin with.	☐	☐	☐	☐
25.	When I win at an outdoor game, a lot of times I don't know why I won.	☐	☐	☐	☐
26.	When I don't do well at something, it is usually my own fault.	☐	☐	☐	☐
27.	When I do well in school, it's because the teacher likes me.	☐	☐	☐	☐
28.	When another kid doesn't like me, I usually don't know why.	☐	☐	☐	☐
29.	I can be good at any sport if I try hard enough.	☐	☐	☐	☐
30.	I don't have much chance of doing what I want if adults don't want me to do it.	☐	☐	☐	☐
31.	When I get a good grade in school I usually don't know why I did so well.	☐	☐	☐	☐
32.	If someone is mean to me, it's usually because of the way I treat them.	☐	☐	☐	☐
33.	When I play an outdoor game against another kid, and I win, it's probably because the other kid didn't play well.	☐	☐	☐	☐
34.	A lot of times I don't know why something goes wrong for me.	☐	☐	☐	☐
35.	If I want to get good grades in school, it's up to me to do it.	☐	☐	☐	☐
36.	If the teacher doesn't like me, I probably won't have many friends in that class.	☐	☐	☐	☐
37.	When good things happen to me, many times there doesn't seem to be any reason why.	☐	☐	☐	☐
38.	If I get bad grades, it's my own fault.	☐	☐	☐	☐
39.	If I want my classmates to think that I am an important person, I have to be friends with the really popular kids.	☐	☐	☐	☐
40.	When I don't win an outdoor game, most of the time I can't figure out why.	☐	☐	☐	☐
41.	I can pretty much decide what will happen in my life.	☐	☐	☐	☐
42.	If I don't have a good teacher, I won't do well in school.	☐	☐	☐	☐
		1	2	3	4
43.	A lot of times there doesn't seem to be any reason why	☐	☐	☐	☐

	somebody likes me.				
44.	If I try to catch a ball and I don't, it's usually because I didn't try hard enough.	☐	☐	☐	☐
45.	To get what I want, I have to please the people in charge.	☐	☐	☐	☐
46.	When I don't do well in school, I usually can't figure out why.	☐	☐	☐	☐
47.	If somebody is my friend, it is usually because of the way that I treat him/her	☐	☐	☐	☐
48.	When I don't win at an outdoor game, the person I was playing against was probably a lot better than I was.	☐	☐	☐	☐

APPENDIX B

INDEX OF PARENTING STYLE (IPS)

T = true F = false						
1	I can count on my father to help me out, if I have some kind of problem.	T	F			
2	I can count on my mother to help me out if I have some kind of problem.	T	F			
3	He keeps pushing me to do my best in whatever I do.	T	F			
4	She keeps pushing me to do my best in whatever I do.	T	F			
5	He keeps pushing me to think independently.	T	F			
6	She keeps pushing me to think independently.	T	F			
7	He helps me out with my school work if there is something I don't understand.	T	F			
8	She helps me out with my school work if there is something I don't understand.	T	F			
9	When he wants me to do something, he explains why.	T	F			
10	When she wants me to do something, she explains why.	T	F			
N = never S = sometimes U = usually						
11	When you get a poor (bad) grade in school, how often do your parents try to encourage you to try harder?	N	S	U		
12	When you get a good grade in school, how often do your parents praise you?	N	S	U		
1=don't know 2=know a little 3=know a lot						
13	How much do your parents really know who your friends are?	1	2	3		
1= almost every day 2=a few times a week 3=almost never						
14	How often do your parents spend time just talking with you?	1	2	3		
15	How often does your family do something fun together?	1	2	3		
1=not allowed out 2=before 8pm 3=8 to 9pm 4=9 to 10pm 5=as late as I want						
16	In a typical week, what is the latest you can stay out at night on school nights?	1	2	3	4	5
17	In a typical week, what is the latest you can stay out on Friday or Saturday nights?	1	2	3	4	5

Y = yes	**N = no**			
18	My parents know exactly where I am most afternoons after school.	Y		N
1 = don't try	**2 = try a little**	**3 = try a lot**		
19	How much do your parents TRY to know where you go at night?	1	2	3
20	How much do your parents TRY to know what you do with your free time?	1	2	3
21	How much do your parents TRY to know where you are most afternoons after school?	1	2	3
1 = don't know	**2 = know a little**	**3 = know a lot**		
22	How much do your parents REALLY know where you go at night?	1	2	3
23	How much do your parents REALLY know what you do with your free time?	1	2	3
24	How much do your parents REALLY know where you are most afternoons after school?	1	2	3

APPENDIX C

PARENT VERBAL INTERACTION

Female: 1=often 2=sometimes 3=never
Male: 4=often 5=sometimes 6=never

Female:	Male	1	2	3	4	5	6
1. My parent praises me when I do something well.		☐	☐	☐	☐	☐	☐
2. My parent yells at me.		☐	☐	☐	☐	☐	☐
3. I argue with my parent.		☐	☐	☐	☐	☐	☐
4. My parent calls me names that hurt my feelings.		☐	☐	☐	☐	☐	☐
5. I talk my problems over with my parent.		☐	☐	☐	☐	☐	☐
6. My parent accepts my opinions about things.		☐	☐	☐	☐	☐	☐
7. My parent belittles me by saying things like, “you are dumb,” or “you are lazy.”		☐	☐	☐	☐	☐	☐
8. My parent compliments me.		☐	☐	☐	☐	☐	☐
9. My parent listens to me.		☐	☐	☐	☐	☐	☐
10. My parent uses profanity when he/she is angry with me.		☐	☐	☐	☐	☐	☐
11. My parent has threatened to slap, hit, or beat me.		☐	☐	☐	☐	☐	☐
12. My parent tells other people nice things about me.		☐	☐	☐	☐	☐	☐
13. My parent is angry with me whenever we talk.		☐	☐	☐	☐	☐	☐
14. My parent says that my brother or sister is smarter, better looking, nicer or more talented than I am.		☐	☐	☐	☐	☐	☐
15. My parent tells me s/he is proud of me.		☐	☐	☐	☐	☐	☐
16. My parent says negative things about me in front of others.		☐	☐	☐	☐	☐	☐
17. Even when I do something well, my parent tells me I could do better.		☐	☐	☐	☐	☐	☐
18. My parent finds fault with everything I do.		☐	☐	☐	☐	☐	☐
19. My parent tells me s/he loves me.		☐	☐	☐	☐	☐	☐
20. My parent tells me I am doing well when I try even if I do not do it perfectly.		☐	☐	☐	☐	☐	☐
21. I know I can talk to my parent, even when I do something wrong.		☐	☐	☐	☐	☐	☐
22. My parent supports my extracurricular activities.		☐	☐	☐	☐	☐	☐
		1	2	3	4	5	6

23. My parent makes negative remarks about the way I look.	☐	☐	☐	☐	☐	☐
24. My parent tells me I am wanted and special.	☐	☐	☐	☐	☐	☐
25. My parent speaks to me in a warm caring tone of voice.	☐	☐	☐	☐	☐	☐
26. My parent calls attention to my mistakes in front of others.	☐	☐	☐	☐	☐	☐
27. My parent tells me s/he wishes I had never been born.	☐	☐	☐	☐	☐	☐
28. My parent asks me how I feel about things.	☐	☐	☐	☐	☐	☐
29. My parent tells me I am a liar.	☐	☐	☐	☐	☐	☐
30. Whenever I try to talk to my parent about something serious, I feel safe and accepted.	☐	☐	☐	☐	☐	☐

APPENDIX D

ENGLISH VERSION

PARENT INFORMED CONSENT (TAG)

PARENT INFORMED CONSENT (TAG)

DEAR PARENTS:

You are being asked to allow your child to participate in a research project involving the collection of verbal and written information from your child about his or her feelings and thoughts. The form you are reading now is the consent form for a study being conducted at the University of North Texas in the Psychology Department as part of the researcher's doctoral dissertation.

PURPOSE AND PROCEDURE. The purpose of the study is to examine effects of psychological evaluations on children. Your child is being considered for placement in the Talented and Gifted (TAG) program of Dallas Public Schools (DPS). You may have already signed a consent form from the school about this potential placement, or you may be presented the DPS-TAG consent forms and this consent form at the same time. If you agree to allow your child to participate in the study described here, he or she will be given a psycho-educational assessment by a graduate student in psychology from the University of North Texas (UNT). There will be no cost to you for this service. The information collected from your child's evaluation will be part of a large research project involving many students. The evaluation will be conducted at your child's school and will include intellectual and achievement measures. You will be provided a copy of your child's test results if you decide to allow your child to participate.

RISKS AND BENEFITS. The method of research used in this project poses minimal risk to you or to your child, since no discomfort or safety risks are involved. Confidentiality will be closely guarded, so no names will be used when reviewing data from this investigation. The information collected that is for use in this study will be analyzed in group form only; no data will be linked to your child or any other individual child. No identification of names or identities will occur in the data analysis. The primary benefit to you and your child includes the possibility of a free psycho-educational evaluation and report that will be provided to you at no charge. Your child may also gain an increased awareness of his or her own feelings and characteristics. In addition, you and your child may help future research concerning psychological evaluations with children. If you wish, the report can be provided to the school which may assist your child's teachers in making appropriate academic plans for him or her, but the results will have no impact on your child's placement in the talented and gifted program.

RIGHT TO REFUSE AND/OR WITHDRAW. Your child's participation is voluntary and your child or you, as the parent, may withdraw from the study at any time. Such a voluntary withdrawal will have no impact on the quality or success of your child's recommended placement in the DPS Talented and Gifted program, which can proceed with or without your consent to participate in this

research. In other words, the placement suggested by the school will not be affected by your child's participation or lack of participation in this study.

FOR FURTHER INFORMATION. If you have any questions or concerns, you may contact the researcher, Martha Buenrostro at 972/982-1290 or the faculty supervisor of this project, Dr. Silverthorn, at 940/565-2655 or metro 817/267-3731 ext. 2655.

INFORMED CONSENT. I understand the risks and benefits of allowing my child to participate. I understand that my child or I can withdraw from participation at any time.

_____ //

Signature of parent date Name of student/age/grade

This project has been reviewed and approved by the University of North Texas Institutional Review Board for the protection of Human Subjects in Research 940/565-3940

APPENDIX E

SPANISH VERSION

PARENT INFORMED CONSENT (TAG)

CONSENTIMIENTO INFORMADO DE PADRE

ESTIMADOS PADRES:

Se pide su permiso para que su niño/niña participe en una investigación que requiere la colección de información verbal y escrita. Su niño/niña dará información segun sus pensamientos y sentimientos. Con su firma esta dando permiso para la participación de su hijo/hija en la investigación que es parte de un requisito de la Escuela Graduada del Departamento de Psicología de la Universidad de North Texas.

INTENTO Y PROCEDIMIENTO. El intento de la investigación es examinar los efectos de evaluaciónes psicológicas en los niños. Su escuela está en el proceso de evaluar la elegibilidad de su niño para participar en el programa TAG (programa para niños talentosos). Si está de acuerdo con la participación de su hijo/hija en este investigación, una estudiante de la escuela graduado de la Universidad de North Texas le dará a su hijo/hija lo siguiente: una evaluación de inteligencia, una evaluación de aprovechamiento y una prueba de integración visual y motor. Se ofrece este servicio gratis. La evaluación se conducirá en la escuela de su niño/niña. Recibirá Ud. una copia de los resultados de la evaluación si decide dejar que su hijo/hija participe. El proyecto incluirá aproximadamente 90 alumnos de las escuelas en Dallas.

RIESGOS Y BENEFICIOS. El método de la investigación que se usará en este proyecto no presentará riesgos significantes a su hijo/hija. La confidencialidad será respetada. Los nombres no se usarán cuando se revisen los resultados. El beneficio primario es la evaluación psicológica y el reporte que le daremos. El reporte que reciba estará escrito en ingles. Si gustaria una explicación en español será disponible y se podrá comunicar con Marta Buenrostro al (972) 982-1290. Esta evaluación se hace como parte de una investigación y el proceso que se usa para determinar participación en el programa de TAG es diferente. Asi que los resultados de esta evaluación no afectarán la decisión de la escuela segun la selección de niños al programa TAG.

DERECHO DE NEGAR O SALIR DE UNA INVESTIGACIÓN. La participación de su hijo/hija es voluntaria. Su hijo/hija o Ud., como padre, pueden salir de la investigación cuando gusten. El salirse de la investigación no afectará la selección o recomendación de el programa TAG.

PARA OBTENER MAS INFORMACIÓN. Se podrá comunicar con Marta Buenrostro al (972) 982-1290 o la Profesora encarga de la investigación Dra. Persephanie Silverthorn, al (940) 565-2655 o metro (817) 267-3731 ext. 2655.

CONSENTIMIENTO INFORMADO. Entiendo los beneficios y riesgos de dejar a mi hijo/hija que participe en este investigación. Entiendo también que mi hijo/hija o yo podemos dejar la investigación en cualquier momento.

_____ //

Firma de Padre **fecha** **Estudiante/edad/grado**

Este proyecto ha sido revisado y aprobado por el Cuerpo Institucional de Investigaciónes el la Universidad de North Texas. Para preguntas hacia los derechos de participantes, se pueden comunicar al telefono Metro (817) 267-3731 ext. 3940.

APPENDIX F

PARENT INFORMED CONSENT (SPED)

PARENT INFORMED CONSENT (SPED)

DEAR PARENTS:

You are being asked to allow your child to participate in a research project involving the collection of verbal and written information from your child about his or her feelings and thoughts. The letter you are reading is the consent form for a study being conducted at the University of North Texas (UNT) in the Psychology Department as part of the researcher's doctoral dissertation.

PURPOSE AND PROCEDURE. The purpose of the study is to examine effects of psychological evaluations on children. If you agree to allow your child to participate, this information will be collected during the psychological evaluation that has already been recommended by the faculty of the school your child attends to find out if your child will receive Special Education services. You may have already signed a consent form from the school about this upcoming evaluation or you may get this form at the same time you receive the consent paperwork from the school.

RISKS AND BENEFITS. The method of research used in this project poses minimal risk to you or your child, since no discomfort or safety risks are involved. Confidentiality will be closely guarded, so names will not be used when reviewing results of this investigation. The information collected that is for use in this study will be analyzed in group form only; no data will be linked to your child or any other individual child. No identification of names or identities will occur in the data analysis. The benefit to your child includes the possibility that he or she will gain an increased awareness of his or her own feelings and characteristics. In addition, you and your child may help benefit future research in the area of psychological evaluation of children.

RIGHT TO REFUSE AND/OR WITHDRAW. Your child's participation is voluntary and your child or you, as the parent, may withdraw from the study at any time. Such a voluntary withdrawal will have no impact on the quality or success of your child's recommended evaluation and referral to Special Education, which can proceed without your consent to participate in this research. In other words, the evaluation suggested by the school will not be negatively affected by your child's participation or lack of participation in this study.

FOR FURTHER INFORMATION. If you have any questions or concerns, you may contact the researcher, Martha Buenrostro at 972/982-1290 or the faculty supervisor of this project, Dr. Silverthorn, who can be reached at 940/565-2655 or metro 817/267-3731 ext. 2655.

INFORMED CONSENT. I understand the risks and benefits of allowing my child to participate. I understand that my child or I can withdraw from participation at any time.

_____ //

Signature of parent date Name of student/age/grade

This project has been reviewed and approved by the University of North Texas Institutional Review Board for the protection of Human Subjects in Research 940/565-3960

APPENDIX G

INSTRUCTIONS FOR INTERVIEW

Instructions to Research Assistants

Thank you for your willingness to assist in this research. Your help is appreciated!! You will be administering several self-report measures to school age children in the 4th 5th and 6th grades in Dallas Public Schools. **You must have your UNT student ID badge with you when you go to these campuses** to assist in this research. If you have any questions regarding these instructions please contact **Martha Buenrostro at 972/982-1290 or 972/681-5669.**

1. Go to the school office and sign in as a visitor. (Wear UNT ID badge)
2. Ask office staff where child can be found. (teacher's room number)
3. Ask office staff where testing can take place. (Set up materials before bringing student.)
4. Go to the child's classroom and give teacher the **LIGHT BLUE** notification form. Be sure to ask about lunch breaks (if applicable) so you can let the child eat at the same time as the class. Ask where the child should return when testing has been completed. (gym, music etc.)
5. Introduce yourself to the student and call them by name. Provide brief explanation about testing. (Part of a study, parent has already signed permission, etc.).
6. Take child to testing location where materials are set up.
7. **You should read all the items to the child and mark the answers they indicate**. Some explanations may be needed for the child to understand the concepts involved. When the questionnaire format changes, go over the change briefly with the child**. If you have problems or want clarification, contact Martha Buenrostro @ 972/982-1290 or 972/681-5669.**
8. **Read the PINK child assent form to student, have student sign the form; you sign below.**
9. Administer the following measures **in this order**:
   How I Feel Questionnaire STAIC (20 items). **YELLOW**
   Self Description Questionnaire SDQ (76 items). **BRIGHT BLUE**
   Multidimensional Measure of Children's Perception of Control MMCPC**RED**
   Index of Parenting Style IPS (24 items). **BRIGHT ORANGE**
   Parent Verbal Interaction Questionnaire PVIQ (30 items). **PEACH**
10. Tell the child you appreciate their help and accompany child back to class.
11. Score the Self Description Questionnaire using **WHITE** scoring sheets and "mini" manual.
12. **Put all the measures and the Child Assent Form in the envelope. Call Martha Buenrostro to arrange pickup of materials.**

APPENDIX H

CHILD ASSENT FORM

CHILD ASSENT FORM

The following form will be read to the child prior to the psychological evaluation. Parental consent will have been obtained prior to reading the form to the child.

You are being asked to participate in a study about children who have psychological evaluations. Your parent has already agreed that you can be in this study, if you want to. You can decide to be in the study or you can decide that you don't want to be in the study. Nothing bad will happen if you decide not to participate in the study, and no one at the school will be mad or upset at you if you choose not to participate.

If you decide that you do want to be in the study, you will be asked many questions about how you feel about yourself. Your answers to the questions about ***you*** can not be right or wrong, because they are just about how ***you*** think and feel. You will also be asked to do different types of work like what you do at school in your classroom. Some of these things will be easy for you and some will be hard, but no one is expected to get them all right. Just do the best you can.

This form was read and explained to me. I agree to participate in this study. I understand that I can change my mind and that I can stop being in the study at any time.

Child **date**

Examiner **date**

1. This project has been reviewed and approved by the University of North Texas Institutional Review Board for the Protection of Human Subjects in Research 940/565-3940.

APPENDIX I

INSTRUCTIONS FOR

GRADUATE STUDENT EXAMINERS

Instructions to Graduate Student Examiners

Thank you for your willingness to assist in this research. Your help is appreciated!!
I am collecting data for my dissertation. If you have questions, contact me for additional information. Martha Buenrostro (972) 982-1290.

1. Go to school office and sign in as a visitor. (Show UNT ID badge)
2. Ask office staff where child can be found. (Teacher, grade, room number, PE, recess etc.)
3. Ask office staff where testing can take place. (Get room and testing materials set up before retrieving child).
4. Go to the child's classroom and ask teacher to allow student to be tested. Be sure to ask about lunch breaks so you can let the child eat at the same time as his/her class. Ask where the child should return when testing has been completed.
5. Introduce yourself to child and call the child by name. Provide brief explanation about testing (part of a study, parent has already signed permission, etc.).
6. Take child to testing location where materials are set up.
7. **You need to read all the self-report measures to child and mark the answers they indicate.** Some explanations may be needed for the child to understand the concepts involved.
    A) Administer the **BLUE** How I Feel Questionnaire (STAIC A).
    B) Administer the WISC-III (standard administration).
    C) Administer the WIAT (standard administration).
    D) Administer the **PURPLE** How I Feel Questionnaire (STAIC A).
    E) Administer the **GREEN** Self Description Questionnaire (state).
8. After testing, score results and prepare report as quickly as possible. Focus on strengths and weaknesses and practical recommendations for any problem areas. Obtain supervising psychologist signature so report can be provided to parents ASAP.
9. **Place all completed test materials (protocols), and the original signed report in the envelope.**
10. Contact Martha to report case as completed and to arrange for pick up of packet.

APPENDIX J

INSTRUCTIONS FOR

DALLAS PUBLIC SCHOOL EXAMINERS

Instructions to PSDS Examiners

Thank you for your willingness to assist in this research. Your help is appreciated!! I am collecting data for my dissertation about the effect assessment has on children. Below are specific instructions for assisting with this research. If you have questions, contact me for information: **Martha Buenrostro (972) 982-1290.**

1. Take student to testing location where materials are set up.
2. Begin by administering the **BLUE** How I Feel Questionnaire to child. Mark student's answers.
3. Administer the WISC-III (standard administration).
4. Administer the WIAT (standard administration).
5. Administer the **PURPLE** How I Feel Questionnaire.
6. Administer the **GREEN** Self Description Questionnaire (state).
7. After testing**, photocopy the front page/Summary Record Form from the WISC and the WIAT protocols. Place the photocopies along with measures in the envelope provided**. Put envelope in Martha Buenrostro's mail box.

APPENDIX M

TABLES

Table 1

Demographic Variables of Student Participants

	TAG		SPED	
	n	%	n	%
Sex[a]				
Female	23	31.1	8	10.8
Male	18	24.3	25	33.8
Grade[a]				
Fourth Grade	12	16.2	22	29.7
Fifth Grade	18	24.3	4	5.4
Sixth Grade	11	14.9	7	9.5
Ethnicity[a]				
African American/Black	5	6.8	23	31.1
Hispanic/Latino	22	29.7	6	8.1
Other	4	5.4	0	0.0
Caucasian/White	10	13.5	4	5.4
Caregiver[b]				
Female/Primary Caregiver	35	50.0	28	40.0
Other	2	2.8	5	7.0
Father/Secondary Caregiver	29	44.6	23	35.4
Other	9	11.0	11	9.0

(table continues)

	TAG		SPED	
	n	%	n	%
WISC-III Full Scale[c]				
below 85	0	0	17	61
85-100	18	60	9	32
100-115	10	33	2	07
above 115	2	07	0	0
WISC-III Verbal[c]				
below 85	4	13	19	68
85-100	14	47	7	25
100-115	8	27	2	07
above 115	2	13	0	0
WISC-III Performance[c]				
below 85	3	10	13	46
85-100	13	43	10	36
100-115	10	33	4	14
above 115	4	13	1	04

Note. N = 74 for variables with [a]sex, [a]grade, and [a]ethnicity, N = 70 for [b] female caregiver, N = 65 for [b]male caregiver, [c]WISC-III scores N = 30 for TAG group, N = 28 for SPED group.

Table 2

Means, Standard Deviations, Range: Self-Concept Sub-scales by Referral Type

	TAG			SPED			TOTAL		
	M	SD	range	M	SD	range	M	SD	range
Physical Abilities	30.02	6.53	17-40	34.15	4.34	24-40	31.86	5.99	17-40
Physical Appearance	29.44	7.21	15-40	31.21	7.02	12-40	30.23	7.13	12-40
Peer Relations	31.15	6.83	13-40	30.88	6.73	15-40	31.03	6.74	13-40
Parent Relations	34.66	5.74	17-40	36.03	5.79	21-40	35.27	5.76	17-40
Reading	32.02	7.33	14-40	29.48	9.18	8-40	30.89	8.24	8-40
Math	32.61	7.99	12-40	32.27	7.96	12-40	32.46	7.92	12-40
General School	30.41	6.43	14-40	25.94	7.81	9-38	28.42	7.38	9-40
General Self	34.17	5.15	18-40	33.55	5.17	19-40	33.89	5.13	18-40
Total Non-Academic	31.49	4.98	20-40	33.21	3.94	25-40	32.26	4.60	20-40
Total Academic	32.02	4.90	23-40	29.18	5.78	13-38	30.76	5.46	13-40

Note. N = 41 for TAG group, N = 33 for SPED group, N = 74 for Total. Five - point Likert-type scale, 1 to 5.

Table 3

Self Description Questionnaire I Sub-scale Intercorrelations

	physical ability	physical appear	peer relation	parent relation	reading	math	general school	general self	non-academic	academic	total self
physical ability	1.00										
physical appearance	.421**	1.00									
peer relations	.206	.546**	1.00								
parent relation	.072	.309**	.505**	1.00							
reading	.022	.135	.125	.275*	1.00						
math	.170	.285*	.254*	.167	-.166	1.00					
general school	-.077	.185	.214	.332**	.546**	.394**	1.00				
general self	.289*	.600**	.517**	.442**	.364**	.239*	.420**	1.00			
non-academic	.594**	.817**	.792**	.639**	.192	.309**	.231*	.365**	1.00		
academic	.070	.318**	.294*	.349**	.608**	.597**	.868**	.486**	.365**	1.00	
total self	.375**	.665**	.645**	.586**	.496**	.556**	.687**	.677**	.801**	.847**	1.00

Note. N = 74. *p< .05. **p < .01.

Table 4

Post-test Self Description Questionnaire Sub-scale Intercorrelations

	post-reading	post-math	post-general school	post-general self
post-reading	1.00			
post-math	.058	1.00		
post-general school	.668**	.571**	1.00	
post-general self	.579**	.302*	.559**	1.00

Note. N = 58. *p< .05. **p < .01.

Table 5

Means, Standard Deviations, Range: Locus of Control Sub-scales

	TAG			SPED			TOTAL		
	M	SD	range	M	SD	range	M	SD	range
Cognitive Domain	32.29	4.29	22-44	35.64	6.39	23-48	33.78	5.54	22-48
General Domain	32.37	5.30	19-43	32.33	6.32	20-46	32.32	5.77	19-46
Physical Domain	30.02	5.24	19-41	31.64	7.16	18-44	30.74	6.17	18-44
Social Domain	29.27	4.25	20-38	29.18	5.67	19-38	29.22	4.89	19-38
Internal Control	52.88	6.97	37-65	52.97	7.39	35-63	52.90	7.15	35-65
Powerful Others	33.05	6.19	20-43	35.00	9.42	18-60	33.91	7.80	18-60
Unknown	38.02	8.42	22-59	40.82	9.86	22-57	39.27	9.13	22-59
Cognitive/Internal	16.17	2.28	11-20	17.48	2.24	12-20	16.75	2.33	11-20
Cognitive/Powerful Others	7.66	2.46	4-14	8.12	3.26	4-16	7.86	2.83	4-16
Cognitive/Unknown	8.46	2.72	4-14	10.03	3.81	4-16	9.16	3.32	4-16

(table continues)

	TAG			SPED			TOTAL		
	M	SD	range	M	SD	range	M	SD	range
General/Internal	11.15	2.41	4-16	10.58	2.87	4-16	10.89	2.62	4-16
General/Powerful Others	10.85	2.62	4-16	10.64	3.44	4-16	10.75	2.99	4-16
General/Unknown	10.37	2.72	4-16	11.12	2.52	6-16	10.70	2.64	4-16
Physical/Internal	13.00	2.29	7-16	13.21	2.71	8-16	13.09	2.47	7-16
Physical/Powerful Others	8.02	2.08	3-12	8.76	2.73	3-12	8.35	2.40	3-12
Physical/Unknown	9.00	2.89	4-16	9.67	3.30	4-16	9.29	3.07	4-16
Social/Internal	12.56	2.28	8-16	11.70	3.15	5-16	12.17	2.71	5-16
Social/Powerful Others	6.51	2.03	4-12	7.48	3.60	4-16	6.94	2.85	4-16
Social/Unknown	10.20	2.62	5-16	10.00	2.85	4-16	10.10	2.70	4-16

Note. N = 41 for TAG group, N = 33 for SPED group, N = 74 for Total. Four - point Likert-type scale, 1 to 4.

Table 6

Locus of Control Sub-scale Intercorrelations

	cognitive	general	physical	social	internal	powerful	unknown
cognitive	1.00						
general	.551**	1.00					
physical	.685**	.644**	1.00				
social	.455**	.495**	.580**	1.00			
internal	.499**	.687**	.616**	.558**	1.00		
powerful	.646**	.602**	.651**	.608**	.347**	1.00	
unknown	.719**	.614**	.771**	.561**	.375**	.412**	1.00

Note. N = 74.

Table 7

Sub-scale Intercorrelations Among Self-Report Variables

	anxietyT_1	anxietyT_2	anxietyT_3	cognitive[b]	general[b]	social[b]	internal[b]	strictnes[c]	warmth[c]	verbal[d]
physical ability[a]	-.003	-.163	-.116	.157	.099	.085	.134	.060	.069	.156
physical app[a]	-.336**	-.320*	-.229	.036	.094	-.031	.020	.162	.378**	.276*
peer relations[a]	-.285**	-.192	-.042	-.172	-.125	-.248*	-.179	.111	.342**	.249*
parent relation[a]	-.150	-.240	-.189	-.029	-.061	-.192	-.151	.374**	.399**	.195
reading[a]	-.300**	-.251	-.248	-.089	.077	.074	.005	.294*	.173	.031
math[a]	-.135	-.184	-.132	-.044	-.061	-.148	-.034	-.050	.008	.226
general sch[a]	-.382**	-.254	-.310*	-.065	-.020	-.058	-.003	.191	.109	.159
general self[a]	-.346**	-.290*	-.159	-.015	.081	-.050	.109	.416**	.301**	.425**
non-academic[a]	-.267*	-.309*	-.195	-.006	.000	-.129	-.056	.194	.418**	.309**
academic[a]	-.386**	-.332**	-.323*	-.123	.011	-.065	-.002	.210	.147	.201

(table continues)

	anxietyT_1	anxietyT_2	anxietyT_3	cognitive[b]	general[b]	social[b]	internal[b]	strictnes[c]	warmth[c]	verbal[d]
strictness[c]	-.237*	-.151	-.115	.008	.158	.064	.169	1.00	.317**	.445**
warmth[c]	-.126	-.224	-.359**	.038	.176	-.011	.138	.317**	1.00	.170
verbal[d]	-.266*	-.212	-.240	.165	.274*	-.029	.174	.445**	.170	1.00
anxietyT_1	1.00	.653**	.450**	.272*	-.206	.128	-.041	-.237*	-.126	-.266*
anxietyT_2	.653**	1.00	.657**	-.066	-.285*	.066	-.174	-.151	-.224	-.212
anxietyT_3	.450**	.657**	1.00	-.053	-.237	-.042	-.223	-.115	-.359**	-.240
post-read[e]	-.191	-.135	-.327*	-.101	.136	.020	.156	.026	.152	-.052
post-math[e]	-.014	-.224	-.354**	-.048	.108	-.076	.091	-.046	.210	.289*
post-gen/sch[e]	-.172	-.156	-.394*	-.099	.165	.018	.175	-.048	.313*	.089
post-gen/self[e]	-.320*	-.496**	-.409**	-.020	.083	-.010	.033	.161	.353**	.043

Note. Anxiety$T_{1,}$ $T_{2,}$ T_3 are STAIC totals. [a] Self Description Questionnaire-I. [b] Multidimensional Measure of Children's Perception of Control. [c] Parenting Style Dimensions. [d] Parent Verbal Interaction. [e] Post-test Self Description - I subscales. *$p < .05$. **$p < .01$.

Table 8

Means, and Standard Deviations of STAIC-A

	N	M	SD
F (2, 53) = 6.77, p =.002			
STAIC-A (T_1)			
TAG	30	29.30[a]	4.36
SPED	28	31.64[a]	6.44
STAIC-A (T_2)			
TAG	29	29.03[a]	3.72
SPED	27	29.30[a]	6.42
STAIC-A (T_3)			
TAG	30	27.07[b]	3.97
SPED	27	27.67[b]	6.58

Note. N = 58. SPED = Referral for Special Education, STAIC-A = State Trait Anxiety Scale for Children - A scale, TAG = Referral for Talented and Gifted. Different letter superscripts show significant differences between means based on Tukey's post hoc analysis.

Table 9

Means, Standard Deviations, and Demographics of Parenting Style Groups

	Authoritative	Authoritarian	Permissive	Neglectful
F(3,54) = 1.48, p = .231				
Warmth/Involvement				
M	3.62	-2.13	2.01	-3.84
SD	2.32	2.90	1.57	2.61
Strictness/Supervision				
M	4.39	1.85	-3.43	-2.61
SD	1.73	7.23	4.65	3.06
TAG Referral Group				
n	13	3	9	16
%	17.6	4.1	12.2	21.6
SPED Referral Group				
n	12	3	8	10
%	16.2	4.1	10.8	13.5
Total Sample				
n	25	7	16	26
%	33.8	9.5	21.6	35.1

Note. N = 74 Represents standardized score totals from PSI with a median split on warmth/involvement dimension and strictness/supervision dimensions.

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